

NO-TILL PRESERVES CONSERVATION LEGACY

By Kindra Gordon

NO-HOE JOE: Joe Breker, Rutland, N.D., talks about his operation during a recent field day. The operation is seeing the sixth generation return to the business.



As the fourth generation to operate his family's farm near Rutland, N.D., Joe Breker says a focus on conservation has allowed the farm to be productive from one generation to the next. Today, Breker's daughter and her family are returning to be the fifth and sixth generations involved in the operation.

In fact, Breker has been so dedicated to conservation that his efforts have earned him the nickname "No-hoe Joe" in his community. Breker, who has been no-tilling since 1979, considers the moniker a compliment.

Today, Breker raises corn, soybeans, and spring and winter wheat, and includes a specialty crop in his rotation. "I usually put in a cool-season oilseed," he says. Flax and radishes have also been included over the years.

EARLY ADOPTER

Breker credits his conservation ethic to his father. "I grew up in the late '60s and early '70s, helping my dad on the farm. He went from moldboard plowing to minimal tillage, and we saw the erosion control and moisture benefits. That decision really influenced me," he says.

Breker then attended North Dakota State University, where he heard about no-till. Bringing the idea home, he with his father first tried it in 1979. They liked the results, and Breker says, "By 1980 we were doing all no-till."

Throughout the dry years of the '80s, no-till worked well. Then, the '90s turned wet, and Breker says, "We've been extremely wet since."

While some farmers abandoned no-till during that time, "No-hoe Joe" has stayed committed. He says, "To continue with no-till, the system had to evolve and be flexible from a moisture management standpoint."

He adds, "I recognized that I needed to add a high-moisture crop, but I didn't want to give up my rotation. I also saw that the fallow period after harvest until spring planting was causing problems and allowing too much moisture to collect."

Breker's solution was cover crops. In the late '90s he began planting field peas after harvest into his wheat stubble. "They helped absorb the wet conditions," he says. But with years of wet conditions, soil salinity became a problem along with the moisture, and field peas didn't do as well.

As a result, today Breker plants a "cocktail" mix of cover crops that includes turnips and radishes as well. "This gives some diversity so the different plants can handle different soil conditions," he explains.

Breker calls his use of cover crops "a wonderful addition" to his operation. He annually plants about 500 to 700 acres after harvest, and then his cow herd begins grazing the cover crops in early October until "the snow gets too deep." Of this he says, "It's been tremendous to put weight on the cows and calves. It's free grazing, and it's good for the cropland as well."

Because of the excess moisture on his farmland, Breker has also used tiling on about half his acres. "We live along the Coteau des Prairie Hills and have intense saline seep, so about six years ago we began tiling to

DEMONSTRATING CONSERVATION FOR OTHERS

IN THE late 1990s as southeastern North Dakota endured increasingly wet farming conditions, farmer Joe Breker and several others from the region recognized a need existed for no-till research applicable to those conditions.

“Guys were beginning to pull out their chisel plows again, and we couldn’t draw no-till information from the research stations located in drier areas like Pierre, S.D., or Mandan, N.D.,” says Breker.

So through a six-county partnership working with soil conservation districts, a demonstration research farm was started in 2001. Called the Conservation Cropping Systems Project, or CCSP, 160 acres of land was rented near Forman, N.D., and the farm has grown from there. The project is managed through the Wild Rice Soil Conservation District with a board of directors serving from soil conservation districts in Ransom, Richland and Dickey counties in North Dakota and Marshall and Day counties in South Dakota. The farm is supported by many different groups and individuals who value conservation of soil, water and energy resources. This July they hosted their 10th anniversary field tour.

“There were nearly 120 area farmers attending, and all wanting to learn,” says Breker, who has served on the CCSP board since the beginning.

Kelly Cooper serves as farm manager of the more than 200 crop plots. The plots include simple two-year rotations of corn and soybeans to six-year rotations of spring wheat, winter wheat, two years of alfalfa, corn and then soybeans. Rotations are studied to compare their effect on water and wind erosion, soil tilth, soil moisture retention, organic matter changes, infiltration, and profitability. Each crop is grown yearly and replicated three times.

Cooper says the demonstration farm has been beneficial in the region to see what may, or may not, work. For example, the farm is in its second year of a bio-strip-till plot that included radishes planted in 30-inch rows and peas between those rows. In the spring, corn was planted in the radish rows. He says the first year the corn yields in this plot were some of the highest for the year. This year, the plot is not looking as promising. But “it’s a good opportunity for us to try different techniques so farmers can see the results,” he says.

Breker agrees, saying, “We appreciate a farm where experimenting can go on, and we don’t have the risk.”



SHARING INFORMATION: The Conservation Cropping Systems Project near Forman, N.D., allows farmers to check out the latest technology for saving the land. Hal Weiser, North Dakota soil scientist with the Natural Resources Conservation Service, visits with farmers from the soil pit.

Breker is convinced that the information produced from the farm has helped maintain no-till acres in the region, as well as initiate more use of cover crops. “After 10 years, data from the farm is available that shows the average yield per crop is generally higher the longer the rotation is,” he says.

He adds, “Information from the farm has given producers the confidence to sign up for long-term programs like the Conservation Security Program and make the commitment to no-till and cover crops. It’s been a good thing.”

For more information about the farm, visit www.notillfarm.org.

allow for better drainage. The tiling and cover crops have been the two most important factors for moisture management on our farm,” he says.

LONG-TERM BENEFITS

As the Breker farm enters its fourth decade of no-till, the soil health benefits are paying off. Specifically, Breker notes that as longtime no-tillers they are seeing mineralization from increased organic matter.

Based on NDSU soil science research, long-term no-till land averages a 50-pound nitrogen credit for cereal crops and about the same for corn, he says. “When you add the soil health benefits from cover crops on top of that, you might get even more mineralization credit.”

Breker has seen this firsthand. He reports that to achieve his 150-bushel-per-acre yield goal for corn, he typically applies 80 units of N — and says, “I think I could cut back and not hurt my yield.” In his area, he says most farmers need to apply 130 units of N to achieve that yield.

Breker also credits his diverse no-till crop rotation with controlling weeds without the need for excess herbicide. “I have continued to raise conventional crops because I use [glyphosate] as a tillage tool. I like having the ability to rotate my herbicide program with the use of crop rotations.”

Undoubtedly, the best benefit from Breker’s conservation efforts is having a farm that is viable for the next generation. His daughter, Olivia Stenvold, attended college, married and started a family, and now is back



LUSH MEAL: The cattle on the Breker operation dine on a wide range of cover crops.



COVER CROP IN ACTION: This cover crop field shows both the peas and the radishes (a pickup’s tracks through the field allow you to see the radishes and turnips).

at the family operation. She will be involved in the farming operation, and they are working to add an agritourism aspect to the business as well.

“I have always been interested in ag education,” Breker says, “and with the next generation coming back to our farm, this seems like a good fit.”

They are adding a lodge on the farm that will provide an agritourism destination. (Learn more at www.cdplodge.com.)

“People often come to the farm and wonder about the technology and crops being grown. We hope to offer a place where people can come and experience rural life and an active farm,” concludes Breker.

Gordon writes from Whitewood, S.D.

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