Farming for water
Farmer uses cover crops and no-till to handle wet soils and weeds.

By Jim Ruen

While many farmers rely on spring tillage to dry out wet soils, Jerry Ackerman goes the other way. His cover crop and no-till program helps him handle heavy rains and wet soils better than tillage and drain tiles. In 2013, it even helped him fight waterhemp thanks to the strips of cereal rye he seeded the previous fall in soybeans and corn.

“Spring 2013, I no-tilled drilled soybeans into 18-inch-tall cereal rye,” recalls Ackerman. “There were spots in the field so wet that water was standing in the tracks of my duals. It was so wet I couldn’t kill the rye until after the soybeans were established. The rye just kept sucking water.

“I also planted corn into a strip of rye seeded the fall before. It controlled the waterhemp in that strip and yielded 20 to 25 bushels more per acre than the strips without the cover crop.”

Wet soils are nothing new to Ackerman, who farms 1,200 acres in Jackson County, Minn., just a few townships north of the Iowa border and about 100 miles west of Interstate 35. The county features rich but mucky soils and low elevations, notes Catherine Sereg, a watershed technician with Heron Lake Watershed District. Sereg knows the soils on Ackerman’s farm well, having done water infiltration tests there as...
“Jerry’s soils handle the equivalent of 8 inches of rain an hour. I’ve seen similar soils that are conventionally tilled without cover crops that can’t handle an inch of rain.”

— Catherine Sereg, watershed technician, Heron Lake Watershed District

Within four days of interseeding cover crops with his young corn, Jerry Ackerman could pick out the emerging clover, rye and brassica seedlings.

that can’t handle an inch of rain.”

After 15 years of no-till soybeans, strip-till corn and periodic rotation to alfalfa, Ackerman thought his soils were in good shape. Five years of experimenting with cover crops, including planting them on prevented planting acres in 2013, has taken his fields to a new level.

Parts of those trials have included different methods of seeding the cover crops. He has used fixed-wing and helicopter aerial seeding, a spinner spreader, and more.

The difficulty with aerial is conflict with crop spray-
Interseeder has no option with the short growth window.

"I like to start flying seed on anytime after the 10th of August, but if a pilot can be spraying 250 to 300 acres with pesticides versus 25 acres with cover crops, that’s what he will do," says Ackerman. "Last year I did some soybeans Aug. 6, but that was too early with my 10-inch rows. Guys who flew them on 30-inch rows got a good stand."

Interseeds cover crops
Recently Ackerman has tried different methods of interseeding in corn. After experimenting some last year, he interseeded all his corn acres this year.

On a new farm that he rented in March, he planted oats and peas early to stop wind erosion. The previous renter had left virtually no residue, harvesting all the cornstalks. By the time Ackerman needed to plant soybeans, the cover was 8 inches high.

"I would like to have let them get bigger and then use them as mulch to help control weeds after spraying with Roundup," says Ackerman. "I think we could have gotten by with burndown and one more shot of Roundup, but it had to be terminated by crop insurance rules."

On his corn acres, he came back with a shot of Roundup and a half rate of Harness followed by a shot of Liberty, and then interseeded the 30-inch rows with three rows of annual rye, medium red clover, rape and forage turnips. An acquaintance, Bruce Brunk, had recently invested in a new 15-foot-wide, multipurpose, no-till drill from InterSeeder Technologies. Developed by Penn State University, it can plant six 30-inch rows, solid seed at 7.5-inch rows or any variation, such as Ackerman’s interseeding.

10-inch-tall cover crops by harvest
“Bruce did 260 acres of corn for me at V6 and V7 stages. I would have liked it earlier, but herbicide application and rain held it up. [The cover crop] was up in two days and 4 to 6 inches high by Aug. 1, where it will wait until the corn begins to dry down."

Ackerman is anxious to see yield results this year. Interseeding a test area with a RoGator and spinner at V7 or V8, followed by 5 inches of rain, produced a 5-bushel yield increase in 2014. At harvest, the cover crop was 10 inches tall and growing. He expects at least that from this year’s interseeding, with benefits to come.

"Over the past five years, I’ve gradually increased my use of cover crops, always verifying what worked and what didn’t," says Ackerman. “Sometimes it has been an eye-opener, like seeing a 22-bushel increase in corn yields where we had cover crops. Wet spots in fields are getting fixed, and I can get into fields one to two days earlier, and I don’t have to add as much tile. This year, every acre will have cover crops growing on it."

Catherine Sereg, a watershed technician with Heron Lake Watershed District, ran several water infiltration tests on Jerry Ackerman’s fields, finding infiltration rates equivalent to absorbing an 8-inch rainfall in an hour. Sereg reports conventionally tilled fields in the area without cover crops are unable to absorb the equivalent of 1 inch of rain falling in an hour.