Focus on the biology of the soil – instead of the chemistry of farming – and find the most efficient equipment for seeding cover crops. That’s advice Jasper County farmer Will Cannon gives to Iowa corn and soybean producers struggling to establish cover crops on their farms.

Cannon, who grows mostly corn and soybeans on about 1,400 acres with his wife Cassie, has been farming full-time since 2013. Before that, he worked a full-time agribusiness job in Ames and farmed part-time for about 15 years.

Cannon said he has learned that you can’t manage two years the same way. “Many farmers are more familiar with applying ‘X’ amount of chemicals and expecting ‘Y’ result,” he said.

Variables such as weather, soil types, equipment, and available help on the farm impact successfully growing and terminating cover crops, says Cannon. “You have to focus on soil conditions. This is about biology,” he said.

Cannon is a well-respected person in conservation circles. In fact, he farms land for former USDA-Natural Resources Conservation Service (NRCS) State Agronomist Barb Stewart and Master Farmer and Jasper Soil and Water Conservation District Commissioner Gordon Wassenaar. Cannon says he currently has 15 landlords.

The cover crop planting process has evolved over that last decade. “When I first started using cover crops, I exchanged ideas with Barb and Gordon,” said Cannon.

With Stewart, he says there was a lot of brainstorming, creativity and thinking outside the box. “There were three years where we experimented with cover crops...”
Profiles in Soil Health

Cassie and Will Cannon, Iowa

Will Cannon says his most recent cover crop success is due to a little ingenuity. After some years of using the vertical tillage tool that Cannon says burned $3,000 of diesel fuel a little, he decided to try a 40-foot rolling harrow soil conditioner. Cannon says there are companies out there now that have developed a similar one-pass cover crop seeder option for a rolling harrow.

Cover Crop Benefits

Cover crops may not produce immediate financial benefits, says Cassie Cannon. “It takes a while to build up that organic matter in the soil,” she says.

Cannon says the most obvious soil improvements are in the eroded areas. “Since using cover crops, we’ve noticed a change in color on some of the eroded side hills,” he said, “but the biggest change is that my bad spots are shrinking more every year.”

He’s also noticed that his crops are less stressed during dry conditions, compared to fields that have been tilled. “We also use less nitrogen — typically .6 or .7 units per bushel — compared to 1 or 2 that a lot of farmers use,” said Cannon.

Evolution of a Cover Crop Seeder

With Wassenaar, they built new equipment to find the easiest, most efficient way to plant cereal rye as soon as possible after harvest. “We started by rebuilding a minimum till drill that could be used to drill into soybean residue,” he said. “We used heavier springs on it but were asking it to do things it wasn’t really designed for. It was super cheap to build, though, and helped us prove our method before bigger investments.”

After three or four years, he began using a vertical tillage tool on the cornstalks and hired a co-op to broadcast the seed with fertilizer. “Then, we added an air seeder to the vertical till,” said Cannon. “Our goal was to seed cover crops within 24 hours of the combine and the retailer just couldn’t reliably do that for us.”

Cannon says he feels he’s considered young in the farm industry. “And there is more information out there.”

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