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Mark Haines
238 Acres
Organic No-till Soybeans
Planting: Cereal Rye

unlock the SECRETS IN THE SOIL

Iowa Farmer Sees Success Crimp Rolling Cereal Rye.

Mark Haines of Sigourney is one of a handful of southeast Iowa farmers who crimp rolled their cereal rye cover crop this spring for a non-herbicide termination.

The group of farmers are looking at maximizing cover crop benefits without spending more time and money managing them, including finding the most efficient and environmentally-friendly termination method.

After Keota farmer Levi Lyle purchased a cover crop roller last year from a manufacturer in Pennsylvania, the group began using it to crimp cereal rye this spring, and they are experiencing great results.

Most Iowa farmers use a chemical herbicide such as glyphosate to kill cover crop grasses and broadleaves.

Soybeans begin to pop through matted down cereal rye about one month after Mark Haines planted soybeans and crimp rolled the rye.

But for organic farmers or those looking to maximize weed suppression from cover crops, using a roller is the best option.

Lyle believes once cover crop rollers become more readily available in Iowa, crimping will quickly catch

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on with conventional farmers, too. "This year we are already seeing scenarios that any farmer could take to the bank," said Lyle. No Iowa-based equipment manufacturers currently make cover crop rollers, he said.

Lyle says there are two key components that make the roller crimper work – the blunt edge and Chevron-pattern. A blunt edge snaps the rye stem without cutting it. "You don't want to sever the rye, or it could grow back," he said. "It needs to stay in contact with the ground."

The Chevron-pattern includes four pressure points which provide efficient weight distribution without kicking up soil. This pattern also makes for a smoother tractor ride, reducing vibration in the cab. Lyle says driving the tractor slowly (5-7 mph) is the most effective and environmentally-friendly way to use the crimp roller.

The key to terminating rye with a roller crimper is waiting until anthesis, or pollen shed, which doesn't typically occur until late May. "If the rye isn't to this stage, it's not going to die," said Lyle.

Haines, who grows conventional and organic crops in Keokuk County near Sigourney, drilled in cereal rye on 238 rolling organic crop acres last fall.

He planted organic soybeans in late May and rolled down cereal rye with Lyle's crimper the very next day. A month later he walked the farm as soybeans flourished. "I am really happy with this," said Haines. "I think it looks really good."

Lyle says the crimping mechanism keeps the rye in contact with the ground and that allows the rye to break down slowly over a six-week period. "You could mow or stalk chop the rye, or use other methods," he added, "but if the rye loses contact with the soil in two weeks, that rye could be gone. We want it to die slowly and that's what the crimper can do."

For organic farmers like Haines, crimp rolling cereal rye makes a lot of sense for weed suppression.

The Chevron-pattern on the crimp roller prevents soil disturbance and reduces vibration in the tractor. The blunt edges snap the rye step without cutting it.

Haines has planted cover crops for six years, but typically baled the rye for his dairy operation. This year, he terminated the rye for the first time using the crimp roller. "I am so impressed with the weed suppression," Haines said. "With just a little more rain, any weeds will be shaded out."

Perhaps the most positive results Haines observed are the spring erosion control provided by the slowly decaying rye and his time savings. "In the past, we would no-till that hill over there and it would still wash," he said. "This year it hasn't washed at all, and we have had some two-inch rain blasts. I think cover crops work very well on these hills."

With the matting provided by the crimped cereal rye, Haines does not have to worry as much about weed pressure, which is saving him time. On an adjacent organic field, he did not plant cover crops and he says it takes him more time to maintain. "With all of those point rows, turning, and then we rotary hoed it three times – just think of all those passes," he said.

"Plus, we are more prone to compaction and erosion. All we had to do on this field is plant and roll."

Haines is confident that the cover provided by the cereal rye will improve soil moisture during the hot summer months and keep soil temperatures down. He believes cover crops will help improve soil structure, too. "More organic matter helps the soil breathe," said Haines. "It's kind of God's way, you know."

Lyle says roller crimpers may be available soon from a regional manufacturer. "I think they will be available to purchase in Iowa soon. If that happens, I think you will see more farmers using them," he said.

Larry Stevens, district conservationist with NRCS in Sigourney, says he is excited to see early adaptors trying something different. "Washington and Keokuk County producers are leaders in adoption of cover crops in Iowa," he said. "I see producers try many different things when it comes to cover crops. The roller crimper will help even more farmers make cover crops work for their systems."

For more information about cover crops and soil health, or for assistance planning conservation on your farm, visit your local USDA-NRCS office or go to www.ia.nrcs.usda.gov.

The group of SE Iowa farmers crimp rolled cereal rye just after, or about 10 days after planting soybeans into the living grass. Many farmers also roll the cover crop and plant simultaneously.

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