

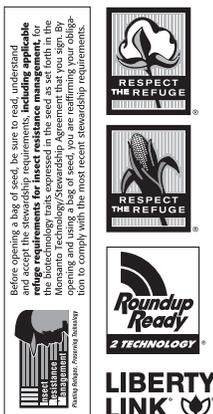
Advertisement

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Biotechnology Industry Organization.

B.t. products may not yet be registered in all states. Check with your Monsanto representative for the registration status in your state.

IMPORTANT IRM INFORMATION: RIB Complete™ corn does not require the planting of a structured refuge **except** in the Cotton-Growing Area where corn earworm is a significant pest. **Genuity® SmartStax® RIB Complete™** and **Genuity® VT Double PRO® RIB Complete™** corn are blended seed corn products. See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate. Genuity and Design®, Genuity Icons, Genuity®, RIB Complete and Design™, RIB Complete™, Roundup Ready 2 Technology and Design®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup®, SmartStax and Design®, SmartStax®, VT Double PRO®, and VT Triple PRO® are trademarks of Monsanto Technology LLC. Ground BreakersSM is a servicemark of Monsanto Company. LibertyLink® and the Water Droplet Design® is a registered trademark of Bayer. Herculex® is a registered trademark of Dow AgroSciences LLC. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. All other trademarks are the property of their respective owners. ©2012 Monsanto Company.



CHOOSE SmartStax Multi-Event Statement from above if this is for bags, tags, www.smartstax.com or news releases.

NATURAL RESOURCE MANAGEMENT

Fly it on

By LYNN BETTS

COVER crops have been around as a sound cropping and soil-health practice for years. But in the past few years, they've been steadily growing in popularity throughout the Midwest. The practice would probably be growing faster if there wasn't so much head-scratching about how to get seed established in the fall.

Jamie Scott of Pierceton, Ind., says flying cover crops on works best for him. He and his parents, Jim and Cathy (the three were named national Conservationists of the Year in 2008 by the American Soybean Association) use cover crops on all 2,000 acres of their no-till corn and soybeans.

"We drill about 200 acres, but that's about all we can get done in a timely way after harvest. So we use an airplane to fly on the seed for 90% of our cover crops," Jamie says.

60,000 acres flown

After studying and testing cover crops for several years, Jamie, a strong conservationist, became a believer in their benefits. He's not only recommending cover crops to neighbors, but he's also using his experience to help them get the seed established. He now spends about two months a year arranging aerial seeding on more than 60,000 acres for cover crops in northeast Indiana.

Aerial seeding is still new to many farmers. Jamie handles the details — like finding a local pilot and airstrip, and getting the seed to the airstrip with an auger truck or large seed bags for fast loading.

"With 60,000 acres of cover crops in our group, we can get some leverage in seed costs," Jamie says. "An organized group is a good way to go." Their average cost for annual ryegrass seed this year was 75 cents a pound.

Time is money, especially with aerial application. "Fast loading, and loading at



MAKE IT SNAPPY: Quick loading is key to the aerial seeding of cover crops into standing corn and soybeans, says Jamie Scott, an Indiana no-tiller and cover-crop seed dealer. This gets the job done more quickly and efficiently than with a drill, high-clearance seeder or fertilizer buggy, he explains.

a strip near the field, are keys to affordable aerial application," says Don Wirth, an annual rye-seed grower in Oregon who works with Jamie and others to expand the use of cover crops.

"There has to be a close working relationship between the pilot, the seed provider and the grower to make this work," Jamie says. "You want to take away downtime for loading, and avoid long distances between the strip and the field to be most cost-effective. It's the pilot's job to fly, and our job to make it most economical," Jamie says.

Seed in early September

"We want our cover crop established and growing in corn before it's harvested," Jamie says. "In corn, there's actually a big window for seeding dates, from August through mid-September. Our average fly-on date over the years has been Sept. 7." His average seeding date for drilled rye has been Oct. 7.

"With drilled cover crops, rye roots grow to about a foot deep. But with the extra month you get with fly-on, ryegrass roots can grow to 3 feet or even close to 5 feet deep," Jamie says. He adds that the most successful cover crops follow an early corn harvest, which lets the cover crop get sunshine for maximum growth before winter.

While he says there's no doubt a cover crop pulls moisture from the soil, Jamie

has also experienced the value of decayed deep roots. The channels created help more rainfall infiltrate, and allow corn roots to more easily grow downward. "You have more access to soil moisture and nutrients with cover crops in the cropping system," Jamie says. "Most people think the value of cover crops is the growth aboveground, but to me the real value is in what happens belowground."

Plane seeds 1,500 acres a day

The Indiana group uses three planes. Each plane can seed about 1,500 acres per day. A diffuser underneath the plane disperses seed from a hole in the bottom of a hopper attached to the plane. The prop wash of the plane blows seed 60 feet to the rear. The seed's swath, or width, depends on the seed type, wind and height off the ground.

"A plane flying 30 to 40 feet off the ground might give you a 55- to 60-foot swath," Jamie says, "but I really recommend you lay a tarp down and do a test flight over it at the height the pilot will fly to check your dispersal pattern."

Jamie says seeding rates are higher for aerial seeding (25 pounds/acre of an 80/20 rye and crimson clover mix) than for drilling (15 pounds/acre) or highboy seeding (20 pounds/acre). But the application costs per acre are lower for aerial seeding (\$11 to \$13/acre) compared to drilling (\$14 to \$16/acre).

Jamie has tried helicopters in the past, but has much better luck with a plane. "I've tested helicopters, but the rotor causes an uneven seed pattern. We've found it difficult to get light seed beyond the downdraft of the tip of the blades."

Best stands in corn

"I can't put my finger on it, but for some reason we've had better cover-crop stands in corn than in soybeans, especially in the first year of cover crops in soybeans," Jamie says. "I'd definitely recommend first-timers try cover crops in standing corn first. One question most people have about corn — a question we had, too — is whether seed gets caught up in the corn whorls. But we've found that's not a problem."

Jamie has also overseeded using his highboy sprayer rig. "The advantage is you don't have to worry about the wind or obstructions like wind turbines," he says, "but the downside is you get some compaction and some trampled crops."

Betts writes from Johnston, Iowa.



JAMIE SCOTT

Scott's reasons for using cover crops

JAMIE Scott spends time every August putting in his own cover-crop plots: 30 of them in three different counties on different soil types. Each year he chooses from 50 grasses and legumes, evaluating species and mixes. He watches to see how they survive the winter, and is a big fan of digging soil pits to study cover-crop roots.

He says it takes three to five years to see soil-health improvements from cover crops, but maintains their advantages are worth the wait. On his list:

- Increased organic matter. "Species with lots of roots in the ground, in particular, build organic matter and hold more nutrients and water."
- Recycling unused nutrients. "We can see we are overapplying nutrients in many cases, by where the cover crop greens up more."
- More biological activity. "On a farm we bought in 1976, more than 30 years later we can still tell where buckwheat was growing, because of increased biological activity in that soil today."
- Better water infiltration. "Long roots from cover crops die and leave channels for water to move deeper into the soil."
- Loosened-up compacted soil. "Long roots are a natural way of breaking up compacted soil."
- Higher yields. "A number of farmers in our cover-crop group saw 40 bushel-per-acre yield increases on their fields using cover crops last year."