

# Seeds Under Cover

Farm Journal plots examine coated seed **BY CHARLENE FINCK**

In spring 2003, we tracked kernels wearing coats to chart the impact on plantability and yields. The kernel-coating tests included two sets of plots—one with Intellicoat Early Plant seed and the other with ProSize coating from Advanced Biological Marketing (ABM), Van Wert, Ohio.

The two types of coated seeds have different missions. Patented by Landec Ag and launched in 2003 on Fielder's Choice Direct hybrids, Intellicoat is designed to keep early-planted seed protected in cold soils until conditions are right to germinate. The other coating, developed by GTG Products and represented by ABM, uses ProSize technology to change kernel size and shape—to improve plantability.

“We had worked with Intellicoat before it came on the market but wanted a chance to plant it in colder, wetter soils,” says Ken Ferrie, FARM JOURNAL field agronomist, who conducted the plots. “However, this was our first opportunity to work with seeds that have been coated to change size and shape. The technology is still in the development stage, but it's an interesting concept. Being able to control seed size and shape with a coating could help improve planting accuracy with a wider range of seeds.”

**How they performed.** The Intellicoat performed as promised by marketing claims. The polymer coating protected the seed planted into cold, wet soil until germination conditions improved. When planted side by side with uncoated seeds of the same genetics and lot number in early April, the coated seeds waited patiently for germination conditions to improve. (The seedbed was in good shape at planting, but the soil temperature was still chilly—just below 50°.)

“The non-coated seeds came up first with an erratic stand,” explains Ferrie. “The coated seed came up about five days later and had a more uniform stand. The plants also were greener and looked healthier. The plants from the uncoated seed showed signs of wind damage and cold-weather stress.”



**The Intellicoat Early Plant polymer coating protects seed while it waits for the right temperature to germinate.**



**The ProSize coating takes a small seed and increases its size. Here, 33-lb. seed was turned into 38-lb. seed.**



**In this case, ProSize coating transformed the 33-lb. seed into 44-lb. seed.**

PHOTOS: MARY ANN CARTER

At harvest, the better start with Intellicoat translated into a slight yield increase (3 bu. in 200-bu. corn). “I see

Intellicoat as a tool you can use to widen your planting window in a few situations without sacrificing a lot of yield,” says Ferrie. “If soils are cold, seedbed conditions are good and you're forced to plant, it makes sense to sock some coated seed in the ground. After the soils warm up, though, I'd switch back to uncoated seed.”

**Changing sizes.** Using a coating to modify seed size and shape holds promise although the technology is still in the development stage. “Being able to change non-uniform seed to match the planter meter would be great,” says Ferrie. The seed industry, of course, could benefit from the ability to upsize small seed into a more saleable product.

Our plots compared 33-lb. non-coated seed with the same seed coated to appear in size as 38-lb. and 44-lb. seed. We compared yields from those three with 50-lb. seed, all with the same genetics. Unfortunately, difficulties with the integrity of the ProSize seed made it hard to truly evaluate the practice.

The seed used was coated with a batch treater and air-dried. Because of that, the coating wasn't “baked” on as well as it should have been. It tended to flake off and was sensitive to humidity. That caused problems with planting and led to multiple drops. Even so, the ProSize coating didn't impact the timeliness of germination.

The technology has promise—if the coating is more uniform and enamel-like. As ABM and other companies work with seed coatings, we will keep taking new entries to the field. **F**

## Thank You

Each Farm Journal Field Test is a cooperative effort. Our thanks go to: Fielder's Choice; Landec Ag and Claude Butt; Advanced Biological Marketing, Terry Roush and Mike Keysor; Golden Harvest; Great Plains Manufacturing and Tom Evans; Kinze Manufacturing and Bill Heick; New Holland; Terry and Steve Ferguson; and Crop-Tech Consulting, Kevin Mohrman, Cory Muhlbauer, Brad Beutke, Jon Luthe and Isaac Ferrie.

