Top Five Reasons Why You Should Apply a Polymer Coating to Your Seed

KEY POINTS:

- When applying fungicides and insecticides to seed, dealers should consider applying polymer coatings to ensure actives stay on the seed in order to maximize return on investment, minimize dust-off and exposure of workers and the environment to chemical products in dust, and to increase flowability and plantability.
- The winter season is the perfect time to learn about polymers and what they can do for you and your grower customers. As more seed treatments are added to seed, the importance of learning how to correctly apply polymers is also growing.

1. MAXIMIZE ROI

"We have fabulous genetics available to us today," says Charlie Hale, marketing strategy and support lead for Becker Underwood, "and as a result the producer makes a significant investment in that seed. You want to make sure you get the maximum return for that investment, and that begins by protecting the genetic potential inside the seed as much as you possibly can."

Providing a measure of protection to seed against disease and insect pressure is one way to safeguard that investment, and polymers should be applied with fungicide and insecticide seed treatments to improve the adhesion of those products to the seed. "They can come off just from the seed rubbing back and forth on each other or during the movement in the grain tank as the seed is being planted. If it rubs off, the protection is gone from the seed—so that investment has been lost," says Hale.

According to Natarajan Balachander, vice president and general manager of field crops for Incotec, the value of seed keeps increasing, so "each seed has to count," he says. "When I started in this industry, a bag of corn could be 50 to 60 dollars—now it's 350 dollars. To get the maximum effectiveness from the seed it is best that all of the inputs are applied on the seed."

2. ENHANCES FLOWABILITY

As more and more seed protection products and micronutrients are loaded onto the seed, the surface of the seed can become quite rough. This rough surface creates friction between the seeds and that friction can exacerbate the amount getting rubbed off. It also causes seeds to stick together, causing bridging and reduced flow. Plantability polymers fill these holes or ridges to make a very smooth surface so that the seeds slide past each other more easily.

"We have seen a rather significant increase in the use of polymers among [dealers] who are treating soybeans … [They have fewer] issues with flow inside their treating facilities, fewer issues with bridging, and the seeds tend to flow out of the boxes better into the planter," says Hale.

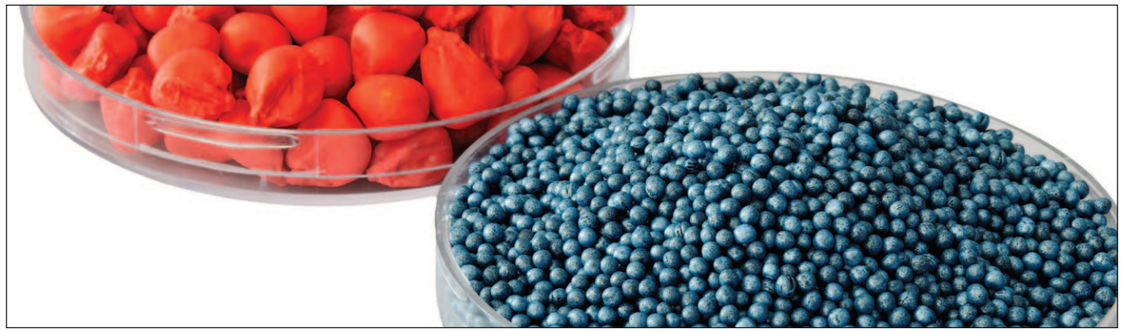

Photo courtesy of Becker Underwood.

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— CHARLIE HALE

3. IMPROVES PLANTABILITY

Applying a plantability polymer increases seed drop accuracy and efficiency, while reducing planter skips and improving the uniformity of seed placement. "And when customers have fewer plantability issues or see more uniform stands, their seed suppliers generally experience fewer complaints about plantability and product performance," says Hale.

Photo courtesy of Incotec.

4. WORKER SAFETY

Retailers are applying polymers to help reduce dust in and around their treating facilities, which helps decrease worker exposure to dust, says Hale. Polymers help minimize dust-off during and after the seed treatment process. "There's a growing interest in making sure that what's put on the seed stays on the seed," says Hale. Polymers help the products applied to the seed, which protect the seed, from being released where you don't want them, he says.

NO TIME LIKE THE PRESENT

For retailers interested in using polymers, the winter months are a very good time to learn about these products and what they can do, says Hale. "It's going to become more and more important that we help ensure what we put on the seed stays on the seed," he says. "Retailers need to become familiar with them because they are going to play a larger role [in seed treatments]."

In fact, says Balachander, the next level of improvements in enhancements and protectants will come from inputs applied on seed. "Most of the work is going to [happen] on the seed. There could be three to five components delivered on the seed—insecticide, two or three fungicides, micronutrients and optionally one biological. From a polymer point of view the challenge will be how to deliver these different actives, including pesticides, fungicides, nutrients and growth promoters." Polymer chemistry will play a large role in delivering all of these components to the seed while still maintaining efficacy of the actives and meeting all handling requirements, he says.

Already, Hale is witnessing increased interest in polymers. "With soybeans we're seeing a growing interest in the use of polymers. Once [dealers] get started using them—especially some of our polymers that have both excellent adhesion and flowability features, for example, the FloRite products—and they have experience with them, they tend to be locked in and very happy with them," he says.

5. BETTER FOR THE ENVIRONMENT

Polymer coatings keep actives on the seed, decreasing dust released into the environment. "There has been concern about the role of dust in the environment, and the potential effect of these materials on other living organisms in the environment," says Hale.

"As concerns are raised about the tools we have available to control disease and insect pests, we will have increased scrutiny—and we will very probably have increased regulation, particularly regulation related to dust. The newer polymer products are tools to help minimize dust."

Applying polymers along with fungicides and insecticides as part of the total seed treatment package aids in ensuring that the tools used to help protect the seed stay on the seed where they can be most effective in protecting the seed investment and present the least risk to workers and the environment.

In addition, delivering protectants on the seed can reduce the need for spray chemicals. "It acts on a small area—on the seed where the need is—so you don't have to spray the whole area," says Balachander.

"There's a lot of drive to deliver plant protection products and nutrients on the seed in a manner that's more effective, efficient and eco-friendly."

Polymer Practicalities

OVER THE PAST NINE YEARS, JOHN HENNENFENT, PRESIDENT AND CEO OF MUNSON HYBRIDS, HAS LEARNED A THING OR TWO ABOUT APPLYING POLYMERS TO SEED. UNDERSTANDING WHAT EACH PRODUCT CAN DO AS WELL AS THE CORRECT APPLICATION PROCESSES FOR THOSE PRODUCTS TAKES SOME TIME TO LEARN; HOWEVER, HENNENFENT SAYS THE BENEFITS ARE WORTH THE GROWING PAINS. "THE POLYMERS WE'RE CURRENTLY USING ARE PRETTY EASY TO USE AND WE HAVE FOUND THEM TO BE VERY SUCCESSFUL. WE HAD SOME ISSUES AT THE BEGINNING, JUST IN THE MECHANICS OF HANDLING THEM AND HAVING THE RIGHT RATES IN OUR SLURRY MIX—EARLY ON IT WAS NOT NECESSARILY A REAL FRIENDLY RELATIONSHIP."

"It's our job as a retailer to make sure that what the grower is paying for, he gets. It's in our best interest. If we put a seed treatment on without the correct polymers to do the job, and that seed treatment doesn't stay on the seed, the grower gets a poor stand, our product performance isn't any good and the grower is not going to be happy."
— John Hennenfent

Perseverance with polymers, including maintaining good lines of communication and working closely with his polymer supplier, has meant real added value for his grower customers, says Hennenfent. "[The value] is in better performance of the other seed protectants applied with the polymer. It can make [seed] look better, help hold additional seed treatments on [the seed], help treated seed be easier for the customers to use and it flows through their planters better. Those are the types of values I see for the customer. He's paying a certain amount for those seed protectants and he wants to make sure that those protectants are on the seed and not laying in the bottom of the bag as dust."

However, growers may never know about the direct value polymers add to their seed. "They expect seed treatment to work and work every time, and they don't expect to have to think too much about it. All the seed treatments the [grower] has paid for will be on the seed. He will see the advantages in plantability. He may not know it is because of the polymer or a combination of polymers used in the treating system, he just knows it planted well and it all came up—a good even stand is key to high yields."

Seed companies also benefit from non-performance factors, says Hennenfent. "There's less dust-off from the seed protectants in the handling system within your facility—that seed treatment stays on the seed so it's not floating around as dust particles. It has an environmental impact on the employee and once it gets out into the countryside. There are some concerns about dust-off and the clothianidin insecticide having an effect on honeybees—so the use of polymers helps hold that seed protectant on the seed."

Photo courtesy of Becker Underwood.

Applying a polymer can also differentiate a company's product on the basis of appearance. Polymers make seed look uniform, and shiny or pearly colours can be added to make the seed more attractive to growers. "Appearance can be a big factor. Just to have a better-looking seed in my bag compared with a competitor's bag, the grower will put the seed in the ground thinking my seed is better. If they open my bag of seed and it has a better luster to it, they're going to think it is better seed."

Communication is key to success when it comes to polymers, says Hennenfent. He suggests retailers who want to add polymers to their treatment mixes to work closely with their polymer suppliers. "Communicate with them what it is you want the polymers to do, what you want your outcome to be. Make sure it's suited for what you need it to do." Another bit of important advice he offers to companies new to polymers is to keep equipment clean and monitor how it is handling the seed with the polymer. "We had issues early on with buildup in equipment, so you want to monitor that even with the new ones, so that you don't have chunks of treatment flaking off and going into your product."

For Hennenfent, the decision to add polymers into the mix at his company was a natural one—he's ensuring his customers get what they pay for. "It's our job as a retailer to make sure that what the grower is paying for, he gets. It's in our best interest. If we put a seed treatment on without the correct polymers to do the job, and that seed treatment doesn't stay on the seed, the grower gets a poor stand, our product performance isn't any good and the grower is not going to be happy. We want [the seed to perform] so that he's successful, so he will continue to be our customer."