Seed Treatments Are Best

Trials Focus On Evaluating Fungicides In Corn, Cotton, Soybean

BETTY VALLE GEGG-NAEGER
MidAmerica Farmer Grower

ST. JOSEPH, LA.

Fungicide research by Dr. Boyd Padgett in corn, soybean and cotton was presented to farmers recently. Padgett, Extension Plant Pathologist, works out of the LSU Ag Center Macon Ridge Research Station.

"We have increased our concentration on corn because there has been a push to use fungicides in corn as a routine practice," he said. "That's not only unique to the MidSouth but in the Midwest for about three or four years now. We've been doing work for three years and, in the absence of disease, we don't get a response or it's very inconsistent. Some varieties respond differently than others. There's a plant health effect that's thought to be associated with some fungicides; we're trying to prove or disprove that right now. We do not see a plant health effect on corn in my studies.

"In some trials we measure stalk density. It has been suggested that even if there is no yield response, there is an increase in stalk density, meaning that if high winds came through the fields the stalks wouldn't lodge. That would increase the efficiency of the harvest. We have not seen this in our tests.

"We utilize varieties that our producers use. I usually pick six to eight varieties that are popular in the area, I'll plant them, we'll spray those varieties with a fungicide and we'll leave the same varieties untreated.

"In other research, there's some new fungicides out we're looking at," he continued. "I do have a test this year where we did get quite a bit of disease pressure in corn and I'm anxious to harvest that to see if we did get some yield response because of the fungicides. These are very good fungicides on disease, so with the presence of disease we'll find out whether there's a benefit for our producers."

Padgett said he's also trying to impress on producers that the later these diseases start in the year there's going to be less yield loss associated with it.

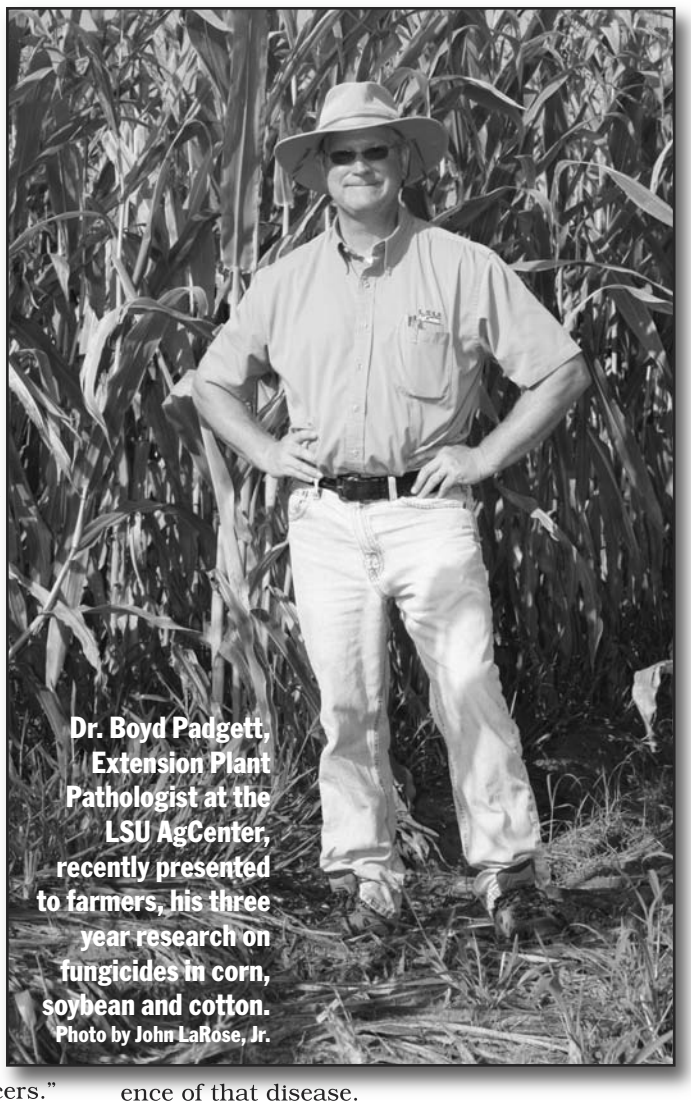
"So if they go out into the field and their corn is dented and they see a lot of disease, they can spray and probably slow the disease but the likelihood of getting economical return is not going to be near as good as if they would have made that application at tassel several weeks before with disease," he said. "The disease just doesn't have enough time to impact yield and there's data to support that."

He's also working with soybean, looking at some new fungicides, including a biological fungicide and several number compounds to determine various timings. There was no rust in Louisiana in mid-summer and that's in contrast to last year when several parishes reported rust.

"There's a big push for these nematicide seed treatments," Padgett said. "Syngenta, Bayer, several other companies have products, and we're looking at those seed treatments' effect on corn, soybean and cotton, trying to garner some information. I think they're going to have a limited fit, and what this offers the producers is the convenience of not having to use granular products or infurrow sprays. Farmers don't have to calibrate any equipment, don't have to worry about anything getting stopped up.

Fumigants are very effective and probably have a very good fit where you have a lot of nematodes. However, there is a waiting period from application to planting with fumigants. Padgett said he does see a benefit for fungicide applications to soybean.

"Usually it's going to be more of a benefit the farther south you go in the state," he said. "In the central part of the state and farther south, aerial blight is more of a problem than it is here. It's not a problem at all in this area, in the northeast or northwest part of the state. Unfortunately, with cercospora blight, which is our number one disease in soybean, our fungicides offer minimal control. You do get a response though and it's usually economical in the presence of that disease.



Dr. Boyd Padgett, Extension Plant Pathologist at the LSU AgCenter, recently presented to farmers, his three year research on fungicides in corn, soybean and cotton.
Photo by John LaRose, Jr.

"There again, to rehash the corn fungicide, we're not ready to say okay, but we feel very comfortable with the soybean fungicides," he said. "The biological is, we're getting varied responses. This is going to be our third or fourth year looking at those. The problem with biologicals, some of them are living agents and if they get exposed to too much heat or too much moisture, some kind of environmental extreme, they die. Some of the biologicals are actually byproducts. They're going to be a little more stable and I think we're going to be looking at that."

The industry doesn't divulge what their secret ingredient is, of course.

"In wheat, which we do quite a bit of work on, fungicides in susceptible varieties work very well," he continued. "We get very good responses, we also try to identify good genetic resistant varieties. I collaborate with the LSU AgCenter breeders. That's going to be the foundation for any kind of disease management program. Fungicides are usually a second or a third choice."

The best tool is getting the genetic resistance in the seed.

"That doesn't cost the grower anything, it's all in that little seed," he said. "You put it in the ground and you don't have to worry about it. You just need to keep an eye out because that genetic resistance doesn't last forever. We saw that occur this year in wheat. We had a good variety of wheat released to our producers, it had been performing very well in our tests, it had been actually out about a year. However, this year that resistance broke down and we had to treat with fungicides. So you can't let your guard down completely." Δ

BETTY VALLE GEGG-NAEGER: Senior Staff Writer, MidAmerica Farmer Grower