Identify The Problem

Researchers Seek Ways To Help Farmers Manage Disease, Pests

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Disease management in row crops was discussed recently by Dr. Boyd Padgett of the LSU AgCenter located at the Macon Ridge Research Station near Winnsboro, La. Padgett spoke at the Northeast Research Station Crop Production and Pest Management Field Day.

Padgett discussed what the AgCenter is doing to address the management of various diseases, specifically in corn, cotton, soybean, milo and wheat.

"We have a number of different diseases that we deal with year in and year out," he said. "I outlined various techniques that farmers can utilize to manage disease in these crops, what techniques are most effective and which ones they should avoid."

"We would like our producers, our agents and our specialists to leave from this stop with something that they can actually use immediately when they leave," he continued. "We'd also like to thank our funding sources, Cotton Incorporated, the Louisiana Soybean and Grain Promotion and Research Board and industry for providing funds for our research, which I could not do without."

Padgett is looking at the new fungicides that are on the market. He said there is an interest in applying fungicides on corn, however the response has been inconsistent and the AgCenter isn't recommending automatic applications to corn at this time. Photo by John LaRose, Jr.

Presently, Padgett is looking at the new fungicides that are on the market. There are a few new foliar applied fungicides for soybeans.

"There is also an interest in applying fungicides on corn," he said. "The response has been inconsistent and the AgCenter isn't recommending automatic applications to corn at this time. We've also looked at various seed treatments in cotton. These treatments provide protection against seedling disease, and nematodes. Some early season insects and new seed treatments in cotton. There is a place for these products. As far as wheat, we have to deal with leaf or stripe rust almost every year. We're trying to find the mix for utilizing a resistant variety and whether or not they need a fungicide.

"Based on our research, a good disease resistant variety has not benefited from a fungicide. However, the organism causing rust is highly adaptable, and genetic resistance can breakdown; therefore it is important to have effective fungicide programs set up."

Asian Soybean Rust has been a hot topic, though it has died down a bit.

"We don't want to be complacent about it," he said. "We're looking at fungicides, of course we're looking at genetic resistance as well to see what would be the best way. We're conducting research all over the state, not only at this experiment station, but also in south Louisiana and central Louisiana. Actually, tomorrow I'm going over to the northwest part of the state to do some work there. So we try to cover the entire state so all of our producers have solutions to their problems."

Padgett said the use of fungicide in corn is relatively new and there's some controversy about whether these fungicides should be utilized as an automatic application in the absence of disease.

Soybean rust, even though it's died down, is still in the back of people's minds. Soybean rust was seen in South Louisiana even before July.

"So growers and consultants are a little cautious about that, and there have been questions about the new chemistries that are available," Padgett said. "That is a hot topic. These newer fungicides are more effective against rust than what we originally had."

Speaking of cotton, Padgett said cotton already comes with a seed treatment, however new seed treatments will provide additional protection against seedling disease.

"There is an insecticide component which seems to be effective under certain conditions," he added. "They all have their limitations, and the nematode component is probably more limited than the other two components; it's not going to be targeted for fields that have a severe problem with nematodes. I have seen that the seedling disease component is pretty effective during short periods of adverse weather. I think growers just need to realize that it doesn't last forever and it probably would not last as long as an in-furrow applied product.

"It makes sense that there would be more residual activity if you pour a gallon of water on the ground as opposed to just a little cup of water," he suggested. "Both of them are water, but where you saturate the ground more it's going to stay wet longer. Same thing with these chemistries. So we're excited about that; it offers growers convenience, they don't have to calibrate equipment and they really like these seed treatments."

There are some limitations and sometimes people get blinded by the convenience, so it's the researcher's job to show them how these products work. They work under certain conditions and removed from that area they may not work, they may not be as effective. Actually, it's up to each individual farmer to make the call after checking the data.

"The main thing we want growers to do is to identify what problems are associated with individual fields," Padgett said. "If you don't have nematodes you don't need a nematicide. If you have a problem with seedling disease you may need to go up to the next level. You may need to go beyond a seed fungicide treatment. So it's important that you know what problems you're dealing with, and that goes with anything in life. If you're going to manage a disease the first thing to do is to identify what is causing it; if you go out shooting the wrong bullet, so to speak, at the wrong disease it's not going to work. So we encourage growers to scout their fields, identify what disease problems they have that are associated with those fields and then take action." Δ

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