

Fight Yield Robbery

Efforts Can Prevent Diseases From Stealing Crop Yields

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Soybean, corn, cotton and wheat diseases and fungicide strategies to control them were discussed recently by Dr. Heather Young-Kelly, new field crop plant pathologist at the West Tennessee Research and Education Center in Jackson Tenn. Her program focuses on the major field crops in West Tennessee and major disease management areas.

“One of the main points I like to bring to the forefront is the disease pyramid, the main background of any disease in any crop and the risk it poses to yield loss,” she said. “There are four things you always need to think about. The first is if you have the pathogen as noted from your field history. If you haven’t rotated recently, you’re going to have a higher risk for disease.”

The next consideration is a susceptible host. If you have a more susceptible variety you’re increasing your risk. The third is weather and environmental conditions.

“You might have a susceptible host and have not rotated, but if the weather conditions aren’t right, you may not have a disease epidemic breakout,” Young-Kelly reasoned. “Then, lastly, one part that sometimes is forgotten is time. In the course of the season do all these things come together during a time when yield will be affected? While my disease plots had all three conditions this past season, the weather actually came later in the season, so where disease did develop in soybeans it did not affect the yield as much as it would have if the rains came earlier and disease would have developed earlier.

“Those are the major points I always like to bring forward when trying to decide whether a fungicide would be economical for you.”

Overall, fungicide resistance management is very important too. Most labels on fungicides carry a fungicidal group number, usually on the top right hand corner, that is mode of site of action of that active ingredient in that fungicide. It’s similar on insecticide and herbicide labels.

“The take-home message is do not continue to use the same group consecutively, multiple times within a season,” Young-Kelly advised. “Strobilurins are fungicide Group 11, triazoles are Group 3. Then there’s the premix and combos that can have more than one number, pos-

sibly a triazole and a strobilurin combined which would be a 3 and an 11.”

She advises a single application of a product combining two modes of action or with two applications or more alternating chemistries of said products because there is strobilurin resistant frogeye leaf spot in Tennessee.

“A new portion of my program this coming season will be able to testing frogeye leaf spot in our lab in Jackson for strobilurin resistant strains. More information on how to send sam-



Dr. Heather Young-Kelly, field crop plant pathologist at the West Tennessee Research and Education Center in Jackson Tenn., discusses her program to study diseases in the major field crops in Tennessee and the risk to yield loss.

Photo by John LaRose Jr.

ples in for free testing will be provided on the UTCrops.com website. We will be doing more research to better understand what the population of frogeye leaf spot is doing across the season and from season to season,” she summed. Δ

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