

Bacterial Blight Found In Arkansas Cotton

HOPE, ARK.

Fueled by high heat and humidity, a cotton disease that nearly disappeared from Arkansas 20 years ago due to resistant cotton varieties and better seed handling has once again been found in state, said plant pathologists for the University of Arkansas Division of Agriculture.

The finding of bacterial blight was confirmed in Arkansas this week by plant pathologist Craig Rothrock at the University of Arkansas Division of Agriculture, said Terry Kirkpatrick, extension plant pathologist based at the Southwest Research and Extension Center in Hope.

The disease has been confirmed in Desha and Mississippi counties and pathologists are working to determine the extent of its spread.

“Bacterial blight was historically a major cotton disease across the U.S. Cotton Belt” causing yield loss, he said.

Kirkpatrick said the bacterium, *Xanthomonas axonopodis* pv. *malvacearum*, can be spread by wind-borne moisture and splashing water, “particularly driving rain – conditions we have seen in strong, but small, pop-up storms around the state.”

The bacterium can infect all parts of the plant, entering the tissue through natural openings like leaf pores known as stomates, or through wounds according to Extension Plant Pathologist Cliff Coker, from the Southeast Research and Extension Center in Monticello.

The bacteria cause spots on leaves, and later, lesions on bolls that can stain lint and create an open door for secondary infections that can rot the cotton bolls.

Kirkpatrick said Arkansas cotton farmers should scout fields immediately, taking a close look at the lower to mid-canopy. The disease must be identified while the symptoms are still visible.

One symptom is excessive leaf drop. “Dryland fields and fields that have been stressed from other reasons may show considerable leaf drop

due to bacterial blight,” he said.

Because other factors can cause similar symptoms submit a sample to the University of Arkansas Division of Agriculture Plant Health Clinic for an accurate diagnosis, Kirkpatrick said. “Your county extension agent can help you with collecting and submitting samples.”

There are no chemicals labeled for control for the disease and the bacterium can survive in plant debris for at least five to six months.

“Knowing where the disease is this fall will allow appropriate cultivation to destroy residue before next season,” he said.

What happens if bacterial blight is found?

“First and foremost, don’t panic,” Kirkpatrick said. “While this disease can be rather severe under the right conditions, it will not result in crop failure.”

Where bacterial blight is present, extension pathologists suggest:

Continue to manage the crop for yield. While the disease may hurt, it will not likely hurt as badly as abandoning the field or cutting back on inputs.

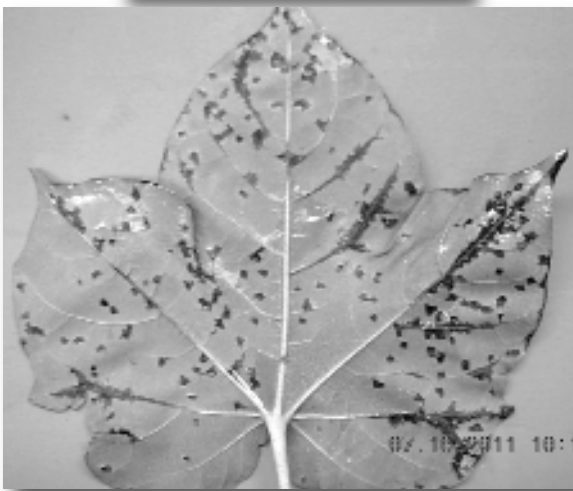
Recognize that the disease can be spread by equipment or people moving through the field when the leaves are wet. Avoid equipment through or scouting fields when the foliage is still wet from rain, dew, or irrigation.

Be realistic about irrigation. While overhead irrigation may contribute to the spread of the pathogen, lack of irrigation will be of a much greater concern. Continue to irrigate as needed to meet crop demands, but do not

over-irrigate.

There are no chemicals labeled for bacterial blight control in the field. Maintain good insect control to minimize the possibility of infection through wounds created by insect feeding.

Don’t over fertilize. Lush, rank foliage will contribute to higher humidity in the canopy, meaning a longer period of leaf wetness, and will enhance infection. In fields or cultivars where the crop tends toward rank growth, consider using plant growth regulators to maintain an open canopy. Δ



(Above) Angular lesions on a cotton plant leaf that follow the veins.

University of Arkansas Division of Agriculture photo by Cliff Coker.

(Top Photo) Blight-lesioned leaves and defoliation related to blight infection.

University of Arkansas Division of Agriculture photo by Cliff Coker.