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Soybean rust update -- August 2005

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Soybean rust update -- August 2005

Abstract

As of today, soybean rust has been found in only five southern states: Alabama, Florida, Georgia, Mississippi, and South Carolina. The disease was found in sentinel plots, commercial production fields, and kudzu plants (see table below). In regions beyond these states, spores that look like spores of soybean rust have been detected by a spore-monitoring project led by the University of Arkansas. A lot more such spores have recently been found in many southern states. In Iowa, no soybean rust has been found in our latest scouting, both in sentinel plots and some production fields.

Keywords

Plant Pathology

Disciplines

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Plant Pathology

Soybean rust update

by X. B. Yang, Department of Plant Pathology

Update of soybean rust. As of today, soybean rust has been found in only five southern states: Alabama, Florida, Georgia, Mississippi, and South Carolina. The disease was found in sentinel plots, commercial production fields, and kudzu plants (see table on page 171). In regions beyond these states, spores that look like spores of soybean rust have been detected by a spore-monitoring project led by the University of Arkansas. A lot more such spores have recently been found in many southern states. In Iowa, no soybean rust has been found in our latest scouting, both in sentinel plots and some production fields.

What is the risk for the rest of the season? For the north-central states, the window of having soybean rust with severity to cause significant damage has been over for a while. In a July soybean rust outlook by our research group, we suggested that the risk of having a soybean rust epidemic was minimal because of dry weather in the Midwest soybean production region and slow development of the disease in the South. However, the window of observing soybean rust is not over yet for some north-central states that have a longer growing season than Iowa. As for Iowa, the chance of finding the soybean rust depends on when the rust reaches Kentucky and Arkansas.

What is the risk for next year? It is a great relief—as well as a surprise—that soybean rust has not reached the major soybean production regions. It had been anticipated that the occurrence of soybean rust will be sporadic in the continental United States once the disease establishes itself. However, the development of soybean rust in this season has been much slower than many experts had predicted. The disease was first found in Missouri last fall when it arrived on Hurricane Ivan in September. In this season, the disease so far has not been found in Tennessee, although the disease showed up in Florida even before March.



It is a great relief—as well as a surprise—that soybean rust has not reached the major soybean production regions this season.
(X. B. Yang)

Besides dry weather, other factors, which are yet to be determined, may have slowed the development of soybean rust. The American Phytopathological Society is organizing a national meeting in November, which is open to people of all sectors, to summarize what we learned from this season and assess the risk for future seasons.

X. B. Yang is a professor of plant pathology working on soybean rust and other soybean diseases.

2005 Soybean Rust Infection Summary

State	County	Approximate Date	Host Plant	Infection Level	Developmental Stage
Florida	Pasco	2/25/2005	Kudzu	Low	
Florida	Hernando	3/22/2005	Kudzu	Low	
Florida	Marion	4/8/2005	Kudzu	Low	
Georgia	Seminole	4/27/2005	Vol. Soybeans	Low	
Florida	Dade	4/29/2005	Kudzu	Low	
Georgia	Terrell	5/27/2005	Vol. Soybeans	Low	
Florida	Jefferson	6/15/2005	Kudzu	Low	
Florida	Leon	6/27/2005	Kudzu	Low	
Alabama	Baldwin	6/28/2005	Sentinel Plots	75–100% Incid. by 7/12	Bloom and R6
Florida	Marion	7/1/2005	Sentinel Plot	Low	R2–R3
Florida	Gadsden	7/6/2005	Kudzu	Low	
Alabama	Baldwin	7/12/2005	Commercial SB	Low	
Mississippi	George	7/13/2005	Sentinel	Low	R5–R7
Georgia	Tift	7/18/2005	Sentinel Plot	Low	R5
Florida	Escambia	7/19/2005	Sentinel Plot	Low	R4
Georgia	Decatur	7/21/2005	Kudzu	Moderate	
Georgia	Decatur	7/22/2005	Sentinel Plot	Low	R4–R5
Georgia	Colquitt	7/26/2005	Sentinel Plot	Low	R4–R5
Florida	Hamilton	7/29/2005	Kudzu	Low	
Georgia	Brooks	7/29/2005	Private Research	Low	
Georgia	Effingham	7/29/2005	Sentinel Plot	Low	
Alabama	Lee	7/29/2005	Research Plot	30% Incid., Low Sev.	R5–R6
Florida	Hamilton	8/2/2005	Commercial SB	Low	R5
Alabama	Elmore	8/3/2005	Sentinel Plot	60% Incid., Low Sev.	R5–R6
Georgia	Tift	8/3/2005	Research Plot	Heavy in Focus Area	R5
Georgia	Tift	8/5/2005	Research Plot	Profuse Sporulation	R3
Georgia	Laurens	8/5/2005	Sentinel Plot	Low	R5
Florida	Hamilton	8/4/2005	Kudzu	Small, Moderate	
Florida	Alachua	8/4/2005	Kudzu	Small, Light	
Florida	Lee	8/8/2005	Kudzu		
Alabama	Escambia	8/8/2005	Sentinel Plot	20% Incid., Low Sev.	R5
Florida	Holmes	8/10/2005	Sentinel Plot	Low?	R5+
Florida	Oskaloosa	8/10/2005	Sentinel Plot	Low?	R5+
Florida	Santa Rosa	8/10/2005	Sentinel Plot	Low?	R5+
Alabama	Baldwin	8/10/2005	Kudzu		
Florida	Taylor	8/11/2005	Kudzu		
Florida	Columbia	8/11/2005	Sentinel Plot	Low?	R5+
Florida	Hillsborough	8/11/2005	Kudzu		
Alabama	Baldwin	8/11/2005	Commercial SB	5 Fields, V. Light–Mod.	R4+
South Carolina	Hampton	8/15/2005	Commercial SB	Low	R3/4
Georgia	Putnam	8/16/2005	Kudzu		
Alabama	Baldwin	8/17/2005	Kudzu		
Alabama	Talladega	8/18/2005	Sentinel Plot and Commercial SB	Low	R6—Sentinel, R3/R4—Commercial
Georgia	Sumter	8/19/2005	Sentinel Plot	Low	R7

Source: Compiled by Kevin Black, GROWMARK, Inc.