



Asian Soybean Rust: Syngenta Spore Trap Project

John Rupe

University of Arkansas

Marty Wiglesworth

Syngenta



Background on Approach



- South America
 - Paraguay, 10 days
 - Argentina, 3 months
- Read a slide in 10 minutes

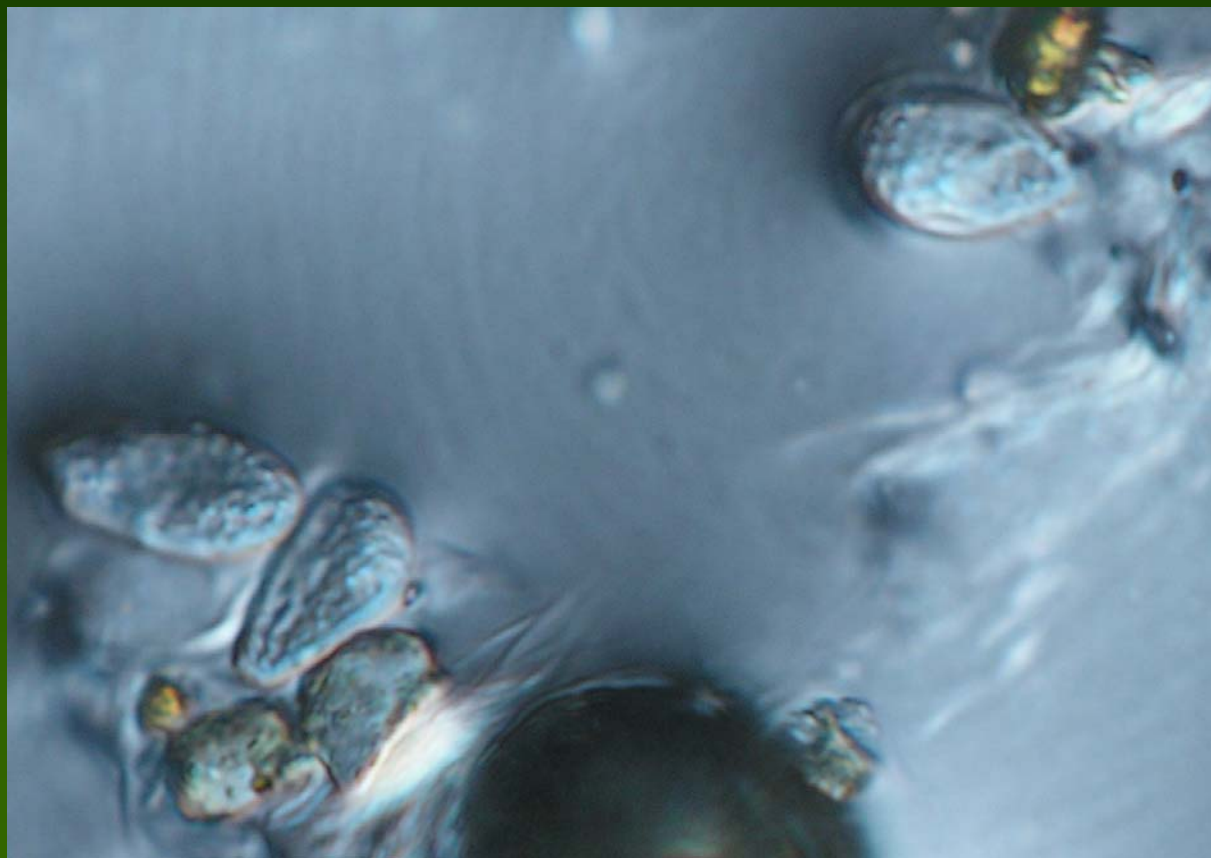
Spore Trap



Identification Criteria

- References: Killed spores, pictures
- Sent pictures to experts
- Soybean rust-like spore
 - Size
 - Surface ornamentation
 - Pigmentation
- Other means of identification not available

Soybean Rust-like Spores



Soybean Rust-like Spores

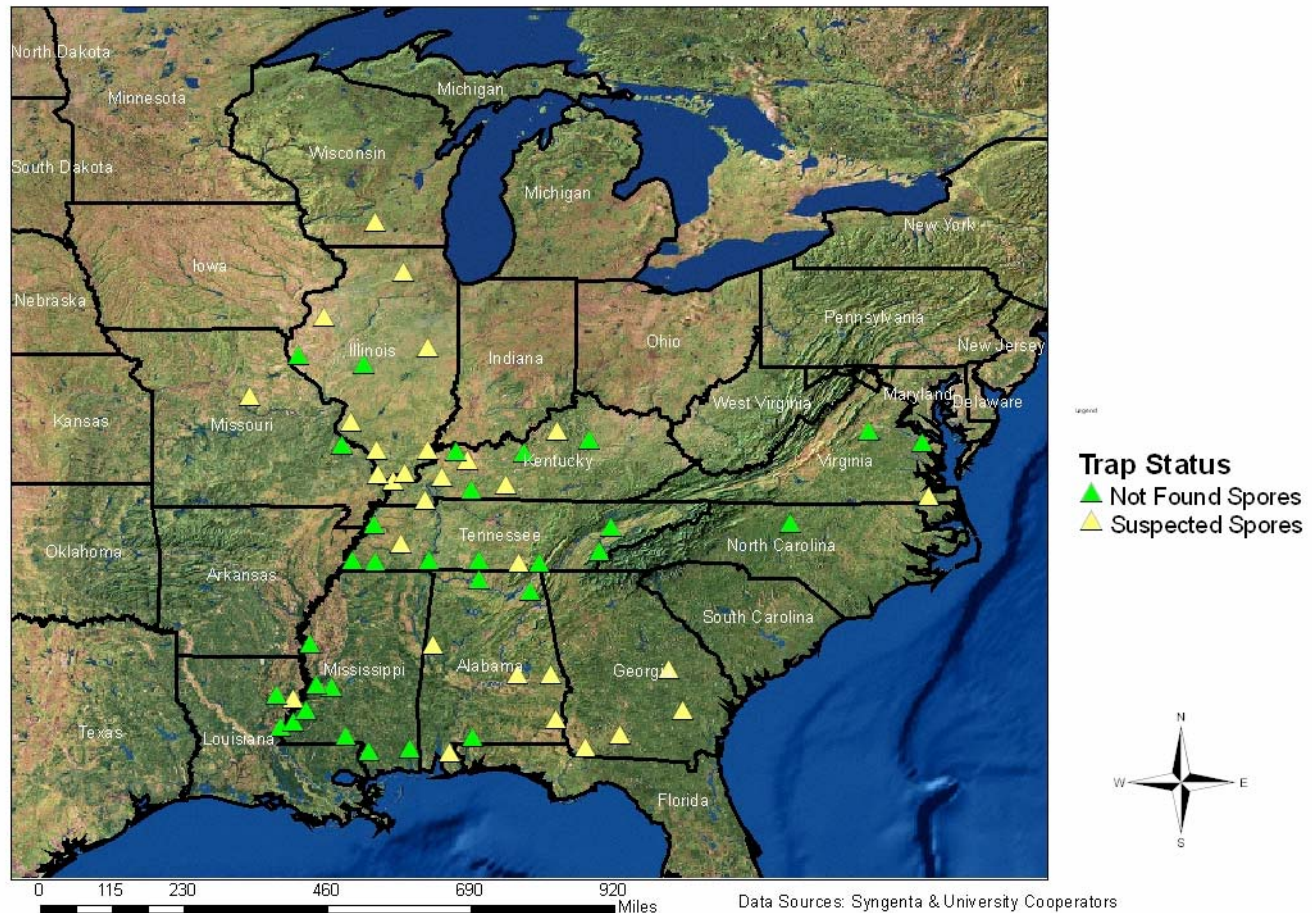


Notification

- State Extension Specialist
- Researchers
 - Marty Wiglesworth-Syngenta
 - Don Hershman-Kentucky
 - Loren Giesler-Nebraska
 - Julie Golod-APHIS
 - Glen Hartman-USDA
 - X.B. Yang-Iowa State
 - Jose Hernandez-USDA
- NPDN-Kitty Cardwell

Spore Trap Locations

Spore Trap Network: GIS Map of U.S. Locations & Trap Status



Summation of results

- Slides received: 1263
- Broken Slides: 57 (5%)
- Slides with soybean rust-likes spores: 201 (17%)
- 13 States-96 sites
 - Found soybean rust-likes spores in all states-59 sites
- Soybean rust found in 4 states(AL, GA, MS, NC)

Georgia Results

County	Spores	Disease	Difference
Colquitt	5 July	3 Aug	+31
Laurens	29 July	3 Aug	+ 5
Washington	5 July	30 Aug	+55
Sumter	5 July	18 Aug	+34
Decatur	28 June	21 July	+23
Tift	15 Aug	15 July	-31
Tift	21 July	None	NA
Appling	28 June	None	NA
Toombs	None	None	NA
Burke	None	None	NA

Alabama Results

County	Spores	Disease	Difference
Lee	25 July	1 Aug	+ 7
Henry	30 June	24 Aug	+55
Elmore	5 July	3 Aug	+29
Escambia	22 July	8 Aug	+17
Baldwin	24 June	30 June	+6
DeKalb	7 July	22 Oct	+77
Pickens	16 Aug	None	NA
Limestone	None	None	NA
Fayette	None	None	NA

Summary 2005

- Soybean rust-like spores found in 13 states and 61% of the traps
- Where soybean rust developed (AL, GA)
 - Average 31 days before disease found
 - Range 5 to 77 days before
 - One site found 31 days after disease

Plans for 2006

- Increase the number of traps slightly
- Begin earlier, possibly March
- Use plastic slides
- Improve the mailers
- Improve trapping medium
- Improve data management system