



Report from the Front Line: Experiences from Veterans

2007

National Soybean Rust Symposium

December 12-14, 2007

Louisville, Kentucky

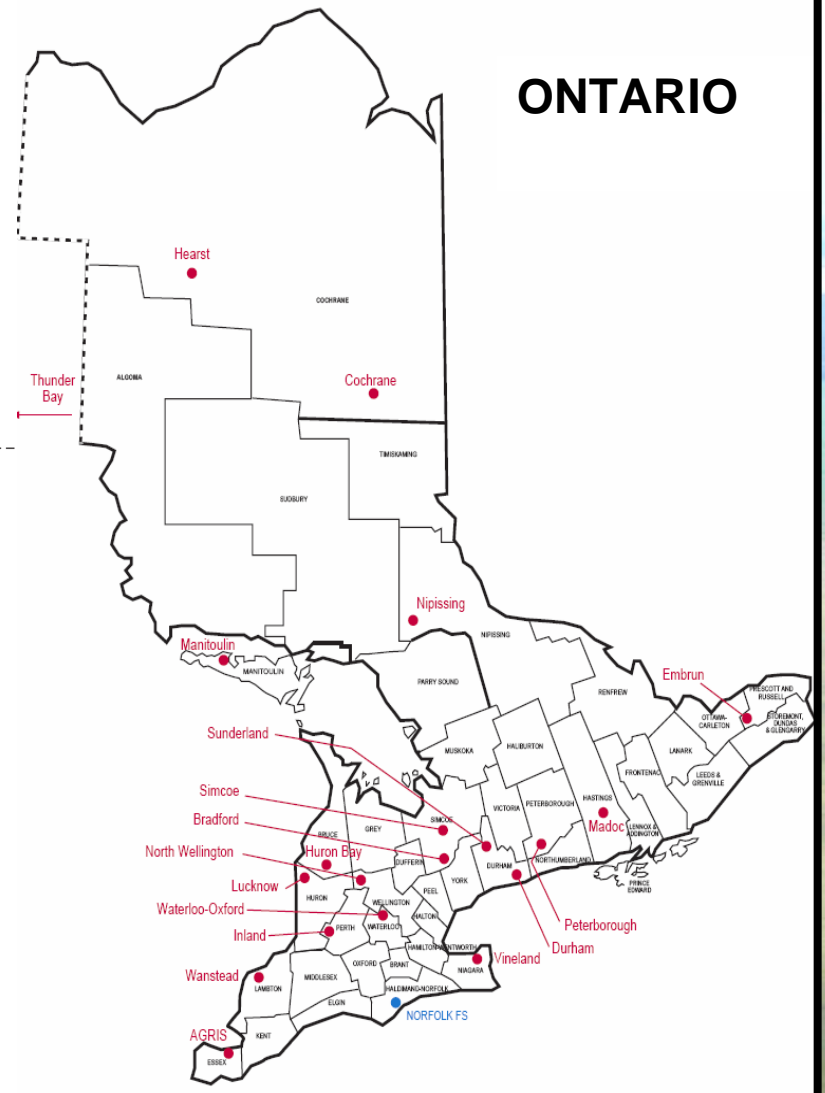
GROWMARK, Inc.
Supply Members

WISCONSIN

IOWA

ILLINOIS

ONTARIO



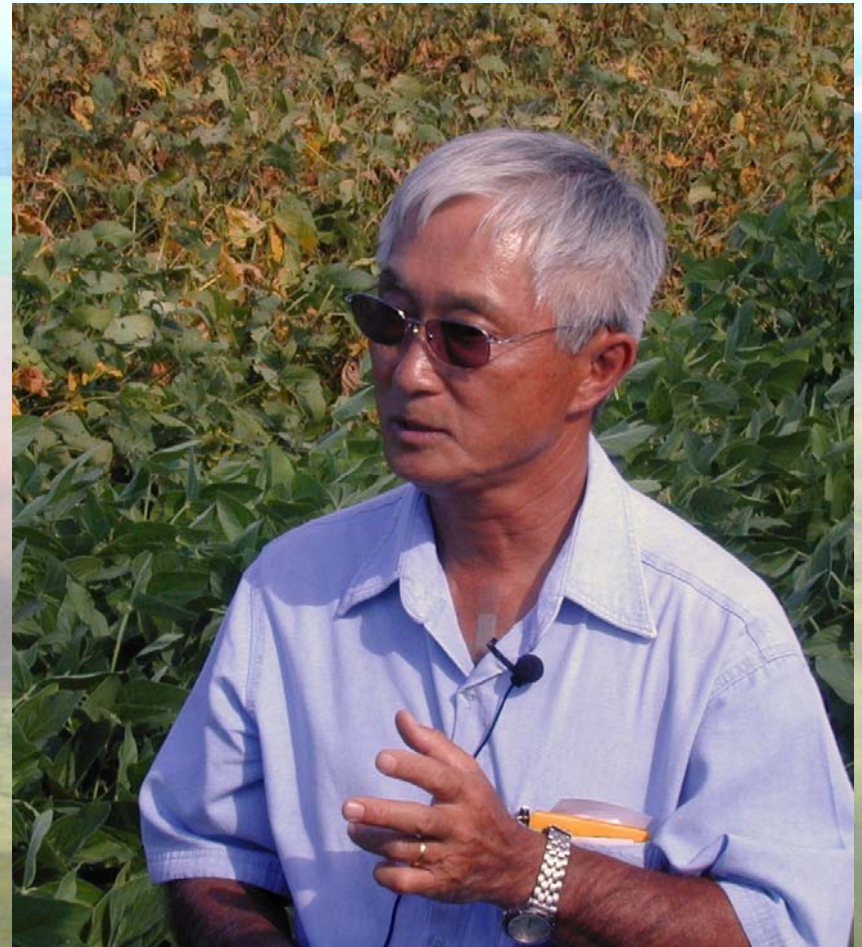
Area Served

Event Sequence

- Asian Soybean Rust discovered in U.S. for the 1st time - November, 2004
- Rust study trip to Brazil - 2/13 - 2/24/05
- Fear, Speculation, Overreaction - 2005
- RustCon Alert System Introduced - 2005
- Crop Specialist Training - 2005 +
- SB Rust a "No Show" for 2005
- Louisiana SBR Observation/Training - 10/4 - 10/6/06
- Soybean Rust (finally) makes it to Illinois, Indiana, Kentucky, too late to cause problems - October & November, 2006 (We had nothing to do with this.)
- Iowa - Positive Soybean Rust sample from a grain bin - March, 2007
- Rust returns to Illinois, Iowa, Indiana, again too late to threaten soybean production - October, 2007

Soybean Rust Study Trip

- February 13-24, 2005
- Santos, Londrina, Rondonopolis, Campo Novo, Amazon, Sinop, Uberlandia, Rio
- Embrapa Soja - Training by Dr. Jose Tadashi Yorinori
- Farm visits
- Interaction with experts



Soybean Rust Study Trip



“RustCon” Alert System

- RUSTCON 5: Normal readiness level - Few or no overwintering soybean rust infections have been detected at upwind locations - Educate yourself about soybean rust.
- RUSTCON 4: Normal readiness - Numerous soybean rust infection points may have been detected at upwind locations, but infection levels remain low - Make sure sprayers are well maintained. Schedule start of scouting visits according to soybean planting dates. Fine tune your action plan.
- RUSTCON 3: Heightened awareness - Soybean rust infections are building up. Fungicide application may be starting at distant, upwind locations - Go over your plan. Be sure that all participating staff know their function and roles. Review product inventories and touch base with growers to confirm their wishes in regard to fungicide timing.
- RUSTCON 2: Arrival of soybean rust appears to be imminent. Begin Preventative fungicide applications with select growers. Intensive scouting should occur. Watch sentinel plots closely. Check rust-monitoring websites 2x per day.
- RUSTCON 1: Maximum force readiness. Rust is confirmed in the area. Scouting should be used to determine appropriateness of Preventative v Curative fungicide applications on a field-by-field basis. Fungicide applications should be underway.

Crop Specialist Training

- Review Rust Situation, Rust Biology
- Disease Triangle
- Scouting Supplies (incl. Magnifiers)
- Risk Assessment / Decision Guide
- Review Numerous Images of SB Rust
- Scouting Techniques
- Sentinel Plots
- In-Field Training

“In-House” Sentinel Plots



Louisiana Soybean Rust Observation & Education

- Whirlwind Trip -
October 4-6, 2006
- Many Thanks - Dr.
Ray Schneider, Dr.
Blaine Viator &
Harold Lambert
- Scouting Soybeans &
Kudzu
- Enviroligix Quick
Stix Tested



2007 - Asian Soybean Rust Returns to the Midwest

- Massac County, Illinois - 1st 2007 detection in Illinois (Ron Hines, GROWMARK Seed Agronomist)
- Followed Ballard County, Kentucky detection
- Irrigated double-crop field
- Probably present for 2-3 weeks prior to detection
- Further development closely monitored
- Used as a field training location

Massac Co. Follow-up Scouting



Dr. Carl Bradley, U of Illinois

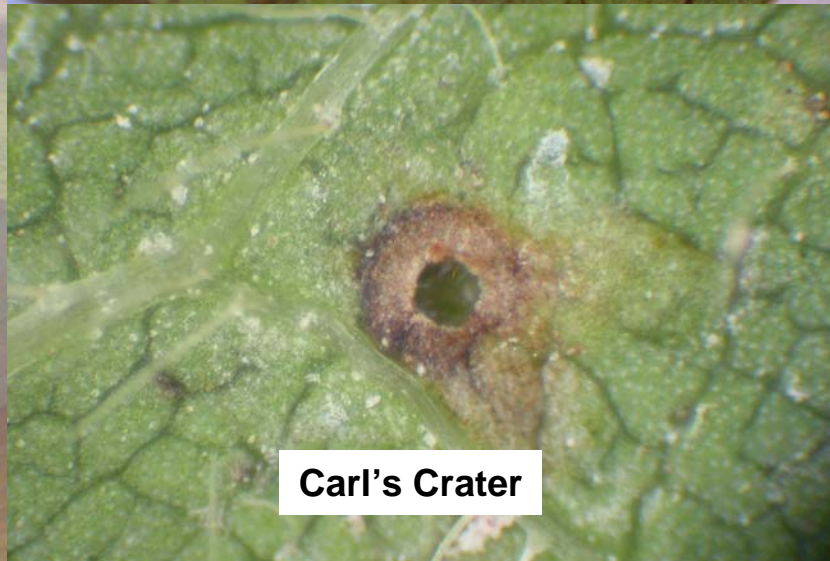
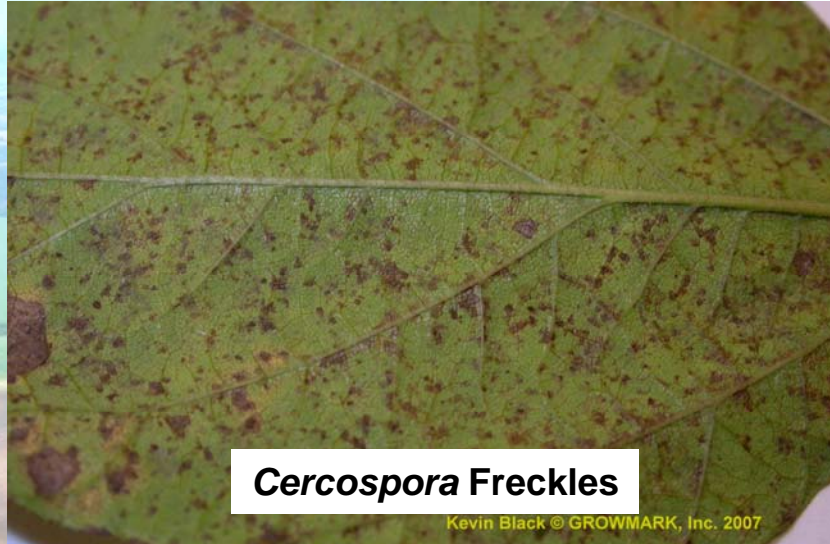
Ron Hines, GROWMARK



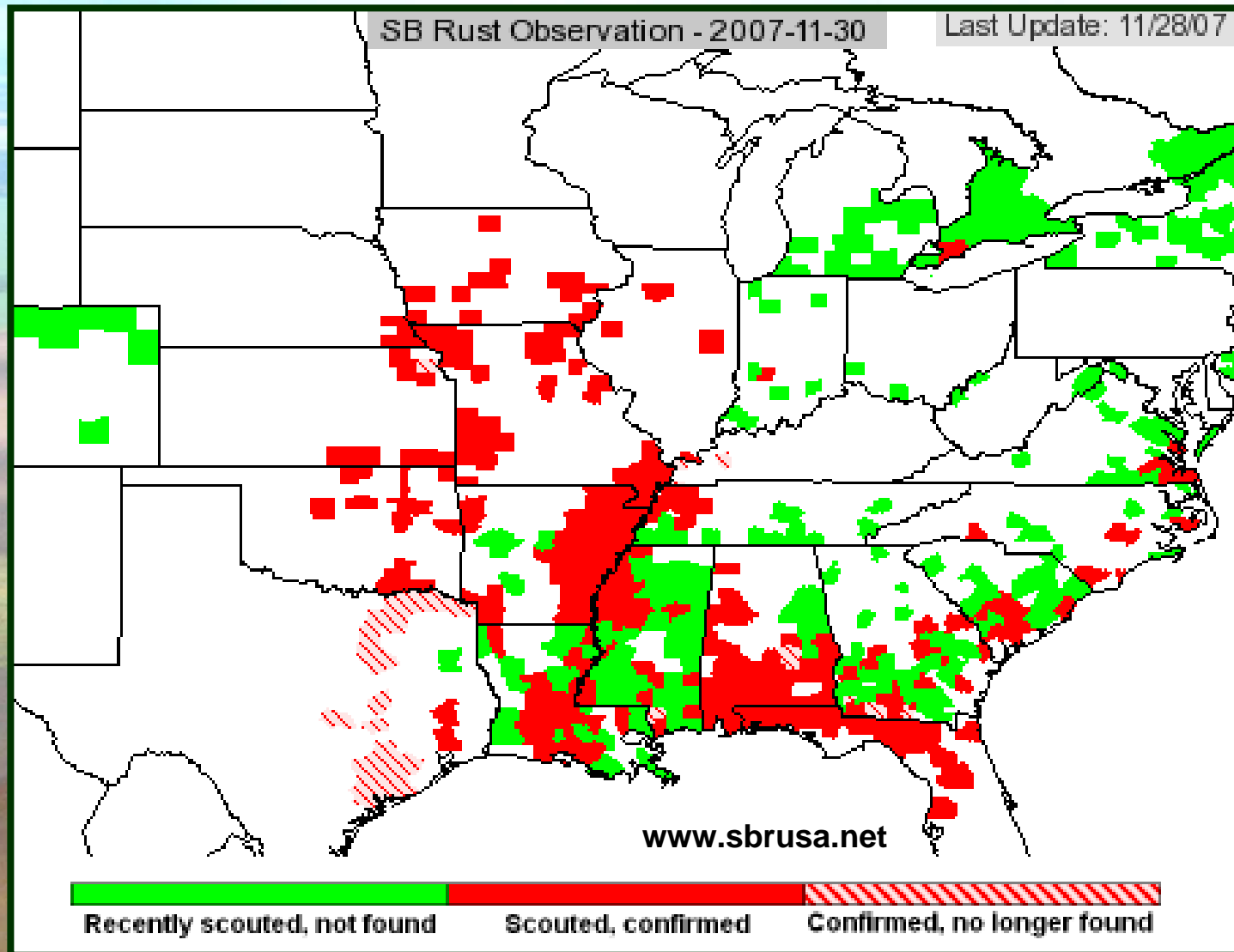
Lateral View of Sporulating Pustules



Annoying Look-Alikes



Detections - Effective 11/28/07



Importance of the “Network”

- USDA PIPE Website - WWW.SBRUSA.NET
- StopSoybeanRust.com
- Local & Regional Experts
 - Dr. Don Hershman
 - Dr. Carl Bradley
 - Dr. Glen Hartman
 - Dr. Ray Schneider
 - Dr. Carrie Harmon
 - Dr. Greg Tylka
 - Dr. Albert Tenuta

The Future - Outlook

- Asian soybean rust is expected to have a low frequency of economic infections in the GROWMARK trade area.
- Soybean rust is believed to be economically manageable.
- Other pathogens currently present a greater risk than soybean rust.
- Someone, eventually, is likely to be surprised by soybean rust.

Thanks to...

- Dr. Ray Schneider
- Dr. Don Hershman
- Dr. Blaine Viator
- Dr. Glen Hartman
- Many others in the "Network"