

# To Asian Soybean Rust and Beyond! Disease and Nematode Management in 2010

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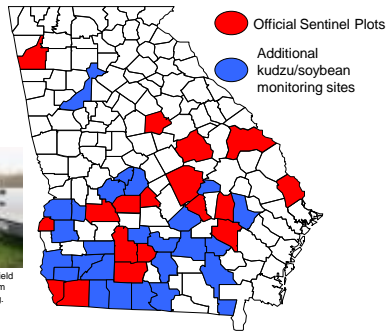
Thomas County  
1 February 2010



## Topics for Discussion

- **Asian Soybean Rust in 2009**
  - Symptoms
  - Sentinel plots and scouting
  - Spread of rust
  - **Macon County and Jeff Davis County**
- **Other diseases in of importance in 2010**
  - White mold and red crown rot
  - Frogeye leaf spot
  - Brown spot
  - Cercospora blight and purple seed stain
  - PHOMOPSIS POD and STEM BLIGHT
  - ANTHRACNOSE
- **Fungicide recommendations for 2010**
  - List of fungicides
  - Timing of applications
  - Number of applications

## 2009 Monitoring Sites



Caleb Clements, soybean rust field scout. His salary is largely from Soybean Commission funding.



## Why monitoring for Asian soybean rust still matters for Georgia

- Asian soybean rust has significantly reduced yields in commercial fields across the Coastal Plain.
- Asian soybean rust is likely to occur in Georgia every year; however the timing of that appearance is highly variable.
- Best economic management of this disease requires application of fungicides at a critical time; neither too early or too late.



Grady County 2008, Unsprayed field.

## Progress of Asian Soybean Rust in Georgia

First Found Asian Soybean Rust on Kudzu  
Downtown Colquitt 1 Kudzu – March 12, 2009 (small amount over-wintered)

Attapulgus Kudzu - May 26, 2009

Downtown Cairo Kudzu - June 8, 2009

Early introduction suggested that this was "The Year" for ASR.

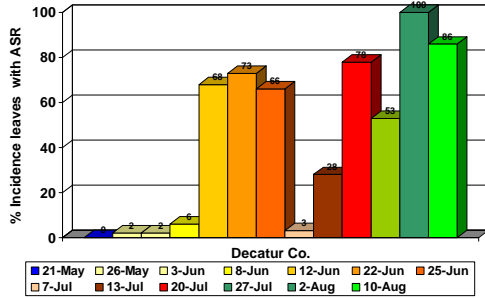
First Found Asian Soybean Rust on Soybeans Sentinel Plots  
Attapulgus Soybeans - August 03, 2009

It took two months between detection in kudzu and soybeans 3 miles away!  
WHY slow movement? Belief is quiet early storm season hampered spread.

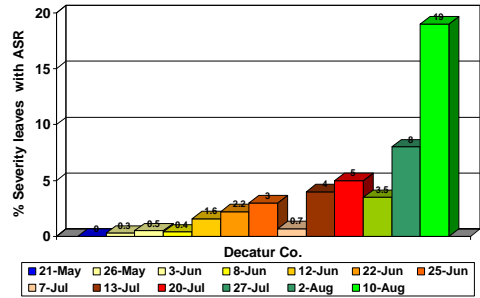
Asian soybean rust found on Soybeans in Tift County on August 11

Current weather conditions, to include TS Claudette, could signal increased spread; Georgia's soybean crop is still largely vulnerable.

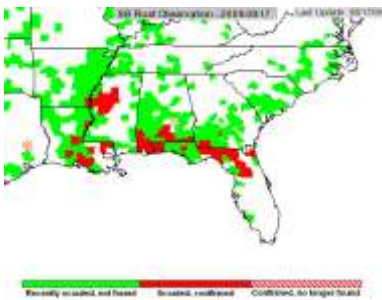
### Development (Incidence) of Asian Soybean Rust on Kudzu in Decatur County



### Development (Severity) of Asian Soybean Rust on Kudzu in Decatur County



### Soybean Rust 17 AUG 2009



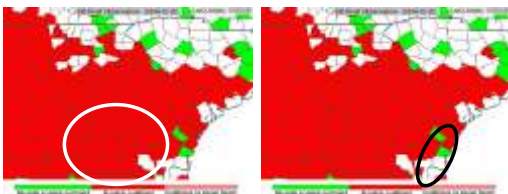
### Macon and Jeff Davis Counties 2010

- Rust already established in some commercial fields in Macon County at time we found rust in Sumter Co. sentinel plots.
- Rusty already established in some fields in Jeff Davis Co. before we found rust in east Georgia.
- I may have been too conservative in fungicide advisory.



2009 Jeff Davis County, Tim Varnedore

### Asian Soybean Rust in Georgia in 2009



Area of greatest impact

Area of least detection

### Summary

- Asian soybean rust got an early start in 2009 in Georgia but stalled for almost 2 months.
- Real spread of rust did not occur until August and really into September.
- For most growers, sentinel plot system provided advanced warning for most soybean acreage in Georgia.
- **More conservative assessment of Sentinel Plots needed for some fields, e.g. Macon County and Jeff Davis County.**

### Disease Issues on Soybean in 2009

- Southern blight (white mold) on soybeans
  - Severe in early-season, likely from very warm soils
  - Growers wanted to fungicide recommendations
  - Quadris labeled for control of disease; no data from UGA
- Phomopsis pod and stem blight- severe in 2009
  - More than tebuconazole needed???
- Cercospora blight
  - Rust fungicide applications help;
  - yield impact unclear
- Anthraxnose
  - Fungicide applications appropriate;
  - can severe yield loss
    - More than tebuconazole???
- Downy mildew.
  - No fungicide applications recommended, despite grower concern



### Bigger Problems than Rust Phomopsis pod and stem blight; Anthracnose

- These diseases caused tremendous yield losses in some fields.
  - E.g. Terrell and Macon Counties
  - Washington County (Phomosis)
- Inoculum (spores) can survive in crop debris.
- Phomopsis can exist in stems without visible signs of fungus but may cause significant wilt.
- Timely EFFECTIVE fungicides needed to manage these diseases!!!



### Fungicides for Growers in Georgia

- Chlorothalonil
- Quadris (azoxystrobin)
- Headline (pyraclostrobin)
- Folicur and others (tebuconazole)
- Tilt/Bumper/ProfiMax (propiconazole)
- Domark (tetraconazole)
- Laredo (myclobutanil)
- Headline SBR (Headline + Folicur) **no longer available**
- Quilt (Quadris + Tilt)
- Quadris Xcel (Quadris + Tilt) **NEW**
- Quadris Xtra (Quadris + Alto) **NEW**
- Stratego (Tilt + Trifloxystrobin)
- Alto (cyproconazole)
- TOPGUARD (flutriafol)
- Caramba (metconazole)
- Punch (flusilazole)



Terrell County, GA commercial fields  
Photo: W. Duffie

### TEBUCONAZOLE

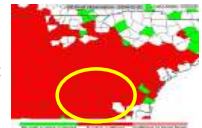
- Folicur 3.6F and many generic formulations.
  - Orius, Tebuzol, Muscle, Savannah, Monsoon, Tebustar, etc., etc.
- Tebuconazole is "priced to sell"!
- Tebuconazole is now labeled on
  - Peanut, corn, cotton, soybeans, etc.
- Tebuconazole remains a good fungicide for management of:
  - Peanut soilborne diseases, Asian soybean rust, etc.

### Is there a problem using Tebuconazole?

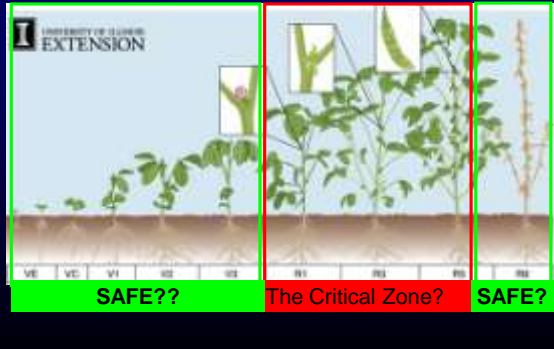
- Obviously, we have a leaf spot resistance problem in peanut.
  - Overuse of this product could lead to resistance in other diseases as well in time.
- Tebuconazole is not as "broad spectrum" as other fungicides.
  - Tebuconazole no longer "best" on any peanut disease
  - Tebuconazole is very good on soybean rust, but not best
  - Tebuconazole very likely NOT product of choice for diseases of soybean like anthracnose and Phomopsis.
  - Tebuconazole may not be choice product on Northern corn leaf blight??
- Tebuconazole is "cheap" however:
  - Growers MUST measure value of "cheap" + "efficacy" of tebuconazole VERSUS "price" and "better efficacy" of newer products.

### DISEASE Recommendations for 2010

- We have effective arsenal of fungicides.
- Be prepared to spray; follow scouting reports.
- Do not recommend fungicide spray if yield potential of beans low or poor growth.
- We do not recommend spray for simply "plant health" benefit alone.....
- Outside circle:
  - Spray when rust detected in local area **and** crop in reproductive growth (hopefully not earlier than R2-R3) **and** consider if weather is favorable.
  - Don't forget about other diseases!!
- Inside circle: consider preventative spray if great yield potential; R2-R3 growth stage, concerns about Phomopsis/Anthracnose, and applying Dimilin/boron.



### Growth Stages of the Soybean Plant



### 2010 Recommendations

Veget	R1	R2	R3	R4	R5	R6
Preventative Programs						
Is threat severe enough to spray?						
			strobilurin	→	triazole	
			strobilurin	→	triazole + strobilurin	
"Rust is in the field" Programs						
			triazole	→	triazole	
			triazole	→	triazole + strobilurin	

### 2010 Recommendations (Rust + other)

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