Overview and Value of Sentinel Plots for 2007

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2007 Sentinel Survey

- Survey sent to SBR Sentinel Listserve (Coordinators in 36 states, 2 provinces, and Puerto Rico).
- Responses received by 28 states, 1 province and Puerto Rico.
- U.S. responses represent 40.34 million soybean acres*

*63.4% of U.S.’s 63.67 million acres
Total Number of SBR Sentinel Plots

Totals

Soybean: 655 (650)*
Kudzu: 65 (64)
Other: 93 (39)
All hosts: 813 (753)

*( )=2006 numbers
How many people were directly involved in your sentinel monitoring program?

475 people involved based on survey responses.
Which entity(ies) established your sentinel plots?

- Other (specify):
- Producer
- Extension Agent
- Ag Dealer
- Consultant
- University Plant Pathologist
- University Agronomist
- State Dept of Agriculture

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*2005 Percent, 2006 Percent, 2007 Percent*
Were multiple soybean maturity groups planted?

- One MG was used state-wide
- Throughout the state, but only one MG was planted at each location.
- At some locations
- At each location
- No

Percentage tables for 2005, 2006, and 2007 are shown in the graph.
Were multiple planting dates implemented?

- One planting date per site
- At some locations
- At all locations

68% emphasized early planting in 2007
Were mobile observations a big part of your SBR surveillance network in 2007?

4,055 mobile observations entered
615 positive for rust
How were sentinel plots evaluated for SBR?

- Exclusively lab evaluation
- Primarily lab evaluation with some field evaluation
- Field and lab evaluation about half and half
- Primarily field evaluation with some lab assessment
- Exclusively field evaluation (hand lens)

Percent 2005
Percent 2006

Sentinel Monitoring System
Who was primarily responsible for collecting leaves from soybean or kudzu sentinel plots for field and/or laboratory observation?

- Ag Extension agents
- Crop consultants or ag industry
- University Faculty
- State Dept of AG Personnel
- Student
- APHIS personnel
- Other (specify):
How often were sentinel plots monitored?

- **Weekly all season**
- **Every two weeks in the beginning, then once weekly**
- **Two or more time a week all season**
- **Other (specify):**

**Average of 93 leaves per evaluation**
(Range: 20 – 200 leaves)
13,412 soybean rust observations uploaded to *ipm* PIPE database in 2007
How many stakeholder contacts did you make, based on information presented on www.sbrusa.net?

- Total number estimated contacts = 163,960
- Average Contacts by State = 6,831
Estimate the percentage of soybean acres that the decision to spray or not was based on information provided (directly or indirectly) by sbrusa.net?

- 73% (range of 5 – 99%) of 40.34 million acres.
- Decisions made based on information provided on the *ipmPIPE* SBR website influenced **30.10 million acres**, based on survey responses.
Estimate the number of acres treated where soybean rust was the primary target?

- 1.34 million acres were sprayed in U.S.
- Thus, 3.3% of the soybean acres in U.S. were sprayed for soybean rust in 2007.
- Range of 0 – 85% in responses.
Estimate of Economic Impact of SBR PIPE

Based on 30.1 million acres influenced by SBR PIPE and $18/A for a single fungicide application:

- 1.34 million acres sprayed for SBR = $24M

- At least 28.76 million acres NOT SPRAYED for SBR. Assuming 40% of untreated acres would have been sprayed for SBR if information were lacking, this represents a savings of $207M.
Value of Sentinel Network

• It works well for monitoring SBR.
  – First finds in 19 different states and 1 province were at very low incidence and severity.
  – 57% of first finds prior to Oct 1 were in sentinel plots.

• Sentinel network provides framework for mobile observation activities.

• Used for ground-truthing and refining disease models.
Value of SBR PIPE

• Works well for communicating SBR risk to stakeholders.
• Saves money over what would have been spent if SBR PIPE did not exist.
• Environmental benefits of not inappropriately spraying millions of acres is significant but hard to measure.
• Greatly encourages collaboration and communication at all levels.
Thanks to all of our Cooperators!!