Fungicide Performance in the Northern Soybean Production Region

Summarized by:

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Northern Region ‘Defined’

States included in assessment
Transition states (may see similar response in some years)
Northern Region ‘Results’

- 13 states provided data
- 65 trial locations
- Small plot and strip trials
- Crop response in the absence of rust
  - Strobilurins
  - Triazoles
  - Combination products
  - Multiple treatments
Variability Across Trials

- Maturity groups
  - RM 00
  - RM 0
  - RM I
  - RM II
  - RM III
  - RM IV

- Genotypic interactions

- Environments
  - Drought in 2005

- Confounding from foliar and stem disease
Summarizing results was a BIG shoe to fill!
Disease Control

- Rust was not reported from any northern trial site
- Brown spot, bacterial blight and bacterial pustule were most commonly reported
- Frogeye leafspot and brown scab in some locations
- Disease data not available from most sites
- Most sites anecdotally reported only minor leaf disease
Yield Response by Location
Strobilurin - Headline

N=35
Bushel/Acre yield advantage over untreated at each site

Numeric response – Relative advantage of treatment
Absence of soybean rust
All trials
Significant responses at each site are noted by dark blue bars
Yield Response by Location
Strobilurin - Headline

N=35
Percent yield advantage over untreated at each site

Yield advantage (% deviation from control)

Trial Location

DE IL IL IL KS MD MN MO ND NE NE NE NE WI WI
1 2 4 6 8 3 2 1 2 1 3 2 1 3

Numeric response – Relative advantage of treatment
Absence of soybean rust
All trials
Significant responses at each site are noted by dark blue bars
Yield Response by Location
Strobilurin - Headline

Percent yield advantage over untreated at each site – sites with significant diseases removed from pool

Numeric response – Relative advantage of treatment
Absence of soybean rust and other diseases
Significant responses at each site are noted by dark blue bars

N=32

South Dakota State University
SDSU
Yield Response by Location
Strobilurin - Headline

Numeric response – Relative advantage of treatment
Absence of soybean rust and other diseases
Significant responses at each site are noted by dark blue bars
Assumes $5.00/bu - $12.00/A product - $7.00/A application
Yield Response by Location
Strobilurin - Quadris

N=28
Bushel/Acre yield advantage over untreated at each site

Numeric response – Relative advantage of treatment
Absence of soybean rust
All trials
Significant responses at each site are noted by dark blue bars
Yield Response by Location
Strobilurin - Quadris

Percent yield advantage over untreated at each site

Numeric response – Relative advantage of treatment
Absence of soybean rust
All trials
Significant responses at each site are noted by dark blue bars
Yield Response by Location
Strobilurin - Quadris

Percent yield advantage over untreated at each site – sites with significant diseases removed from pool

Numeric response – Relative advantage of treatment
Absence of soybean rust and other diseases
All trials
Significant responses at each site are noted by dark blue bars
Yield Response by Location
Strobilurin - Quadris

Numeric response – Relative advantage of treatment
Absence of soybean rust and other diseases
Significant responses at each site are noted by dark blue bars
Assumes $5.00/bu - $12.00/A product - $7.00/A application
Yield Response to Strobilurin Across Locations

Ave. yield (bu/A)

Quadris
Headline
Combined

~ 4 bu/A needed for profit!

Assumes $5.00/bu - $12.00/A product - $7.00/A application
Yield Response to Strobilurin Across Locations

Still need ~4 bu/A for profit!

- Indicates better response when disease is controlled (when compared to previous chart)

Assumes $5.00/bu - $12.00/A product - $7.00/A application
Conclusions & Concerns

- Strobilurin products provide excellent, broad spectrum disease control
- Something is happening in the absence of disease
- Inconsistent
- How do we optimize the response?
- Separating influencing factors?
Future Plans

- Establish base protocols for soybean fungicides across sections of the country to provide University data sets to assess fungicides data on crop response
- Share data across state lines through a regional committee to assure a “bigger picture” view of what may be happening
Acknowledgments

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