

THROUGH A GLASS, DARKLY



R. C. Kemerait; Jr.
Department of Plant Pathology,
The University of Georgia



COTTON INCORPORATED

Cotton Incorporated Target Spot Summit

Foliar Diseases of Cotton

- Historically considered “incidental” for cotton production in Georgia.
- Various causes-
 - E.g. *Cercospora*, *Stemphylium*, *Alternaria*
 - **Stemphylium leaf spot tied to nutrient deficiencies, esp. potassium**
- Wet weather blight (Ascochyta blight)
 - *Phoma*
 - Typically seen on younger plants
 - Rarely seen today
- Aereolate mildew
 - *Ramularia*
 - Sporadic occurrence
- -
 -
 -



Ascochyta wet weather blight



Aereolate mildew, Appling Trial 2007



Stemphylium Leaf Spot on Cotton

Seminole County 2009



Rome Ethredge

Leaf Spot Disease in Attapulgu

Stemphylium leaf spot

8 September 2009



Cercospora Leaf Spot on Cotton

Colquitt County 2009



Cercospora Leaf Spot on Cotton

Colquitt County 2009



Fungicides for Foliar Diseases of Cotton

- Topsin-M
 - Section 18 in Florida
 - Specifically for hardlock
 - May also benefit leaf health
- Headline (pyraclostrobin)
 - Received Section 3 label in 2007
 - Single application expected
 - Labeled for foliar disease control
 - “Plant Health” benefit?
- Quadris (azoxystrobin)
 - Supplemental label received in July 2008

The logo for Topsin-M Fungicide features the word "TOPSIN" in a large, bold, black sans-serif font with a registered trademark symbol. Below it, the word "M" is also in a large, bold, black sans-serif font. Underneath "M", the word "FUNGICIDE" is written in a smaller, black, all-caps sans-serif font, set against a green, wavy, horizontal bar.The logo for Headline fungicide features the word "Headline" in a large, blue, serif font with a yellow outline. Below it, the word "fungicide" is written in a smaller, yellow, sans-serif font.The logo for Quadris Fungicide features the word "Quadris" in a large, bold, sans-serif font. The "Q" is red, and the rest of the letters are blue. Below it, the word "FUNGICIDE" is written in a smaller, blue, all-caps sans-serif font.

2007 Appling County Fungicide Trial

Photograph by Sandy Newell

Untreated Plot/Areolate Mildew



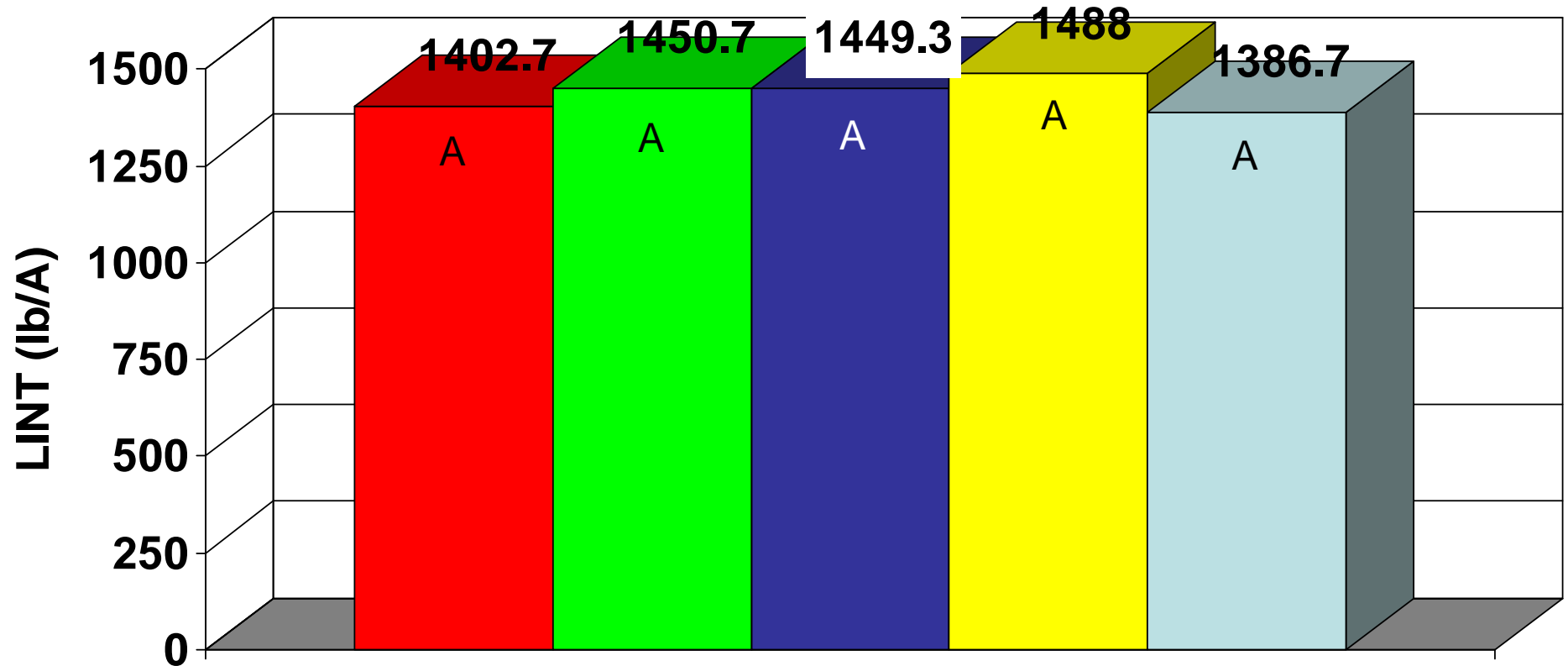
2007 Appling County Fungicide Trial

Photograph by Sandy Newell

Pyraclostrobin mid-canopy/Areolate Mildew



Appling County Fungicide Trial 2007



■ Untreated

■ Headline, 6.14 fl oz

■ Caramba, 12 fl oz

■ Quadris, 9.2 fl oz

■ Topsin, 16 fl oz

Two shots of Headline (6 fl oz/A) and
0 lb/A vs 180 lb/A potassium

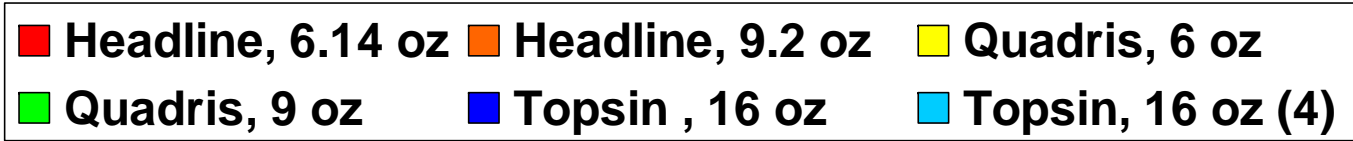
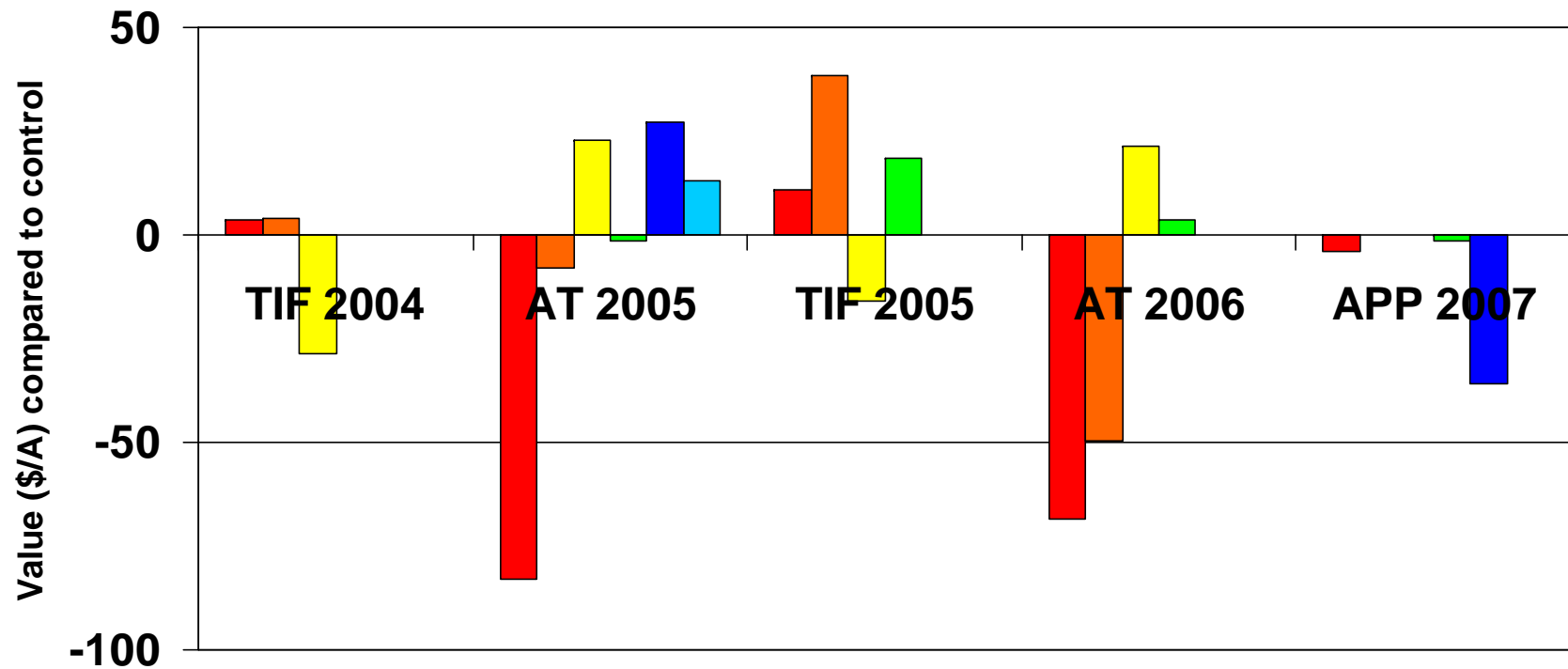


Stemphylium leaf spot 2010

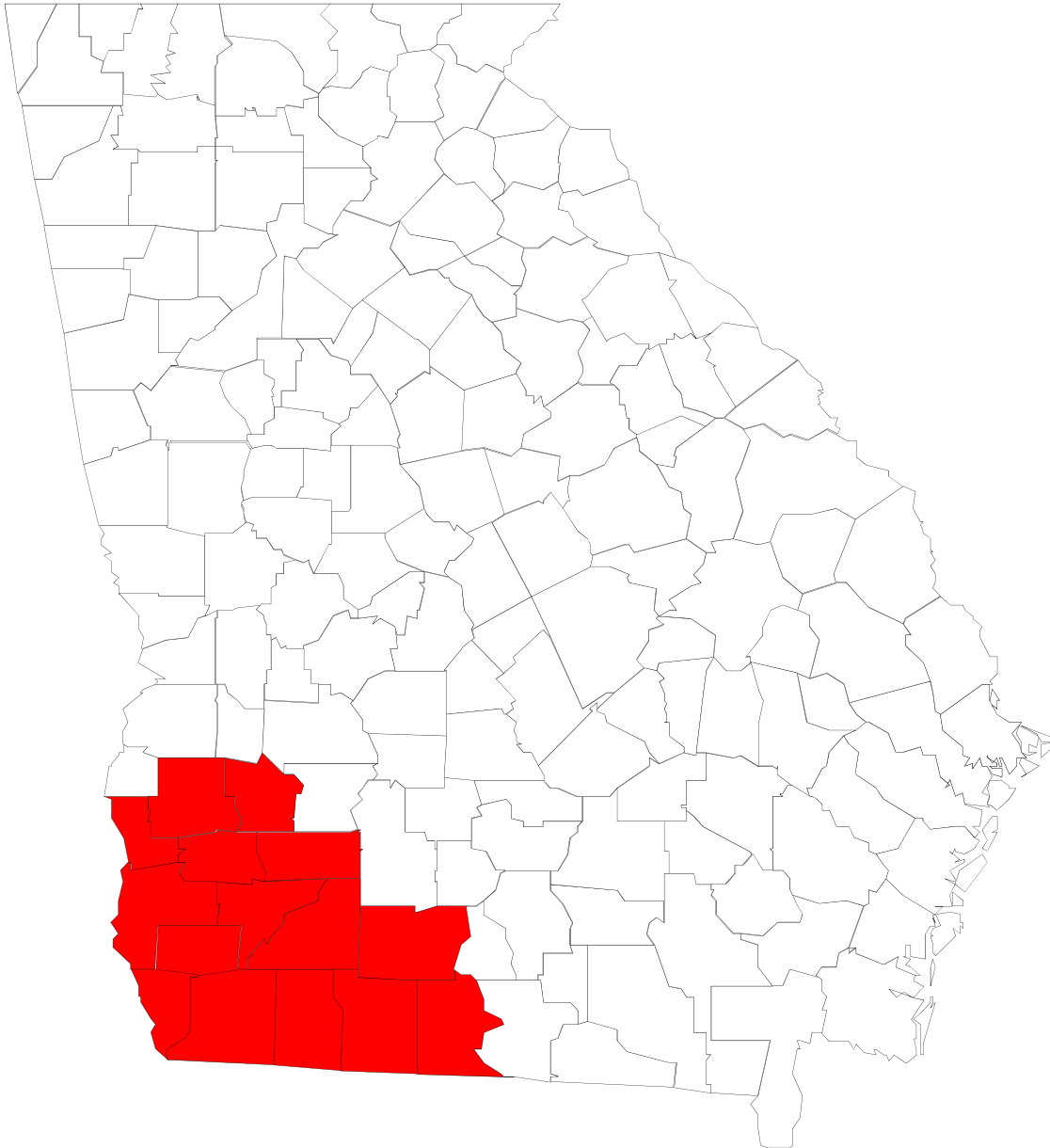
Cotton Fungicide Studies

2004 + 2005 Tifton, 2005 + 2006 Attapulgus, 2007 Appling Co.
 2 (3) Applications beginning at full bloom

Bottom line- 10 times made a little money, 10 times lost money



In desperation,
"BOB!! It CAN'T all be potassium deficiency"

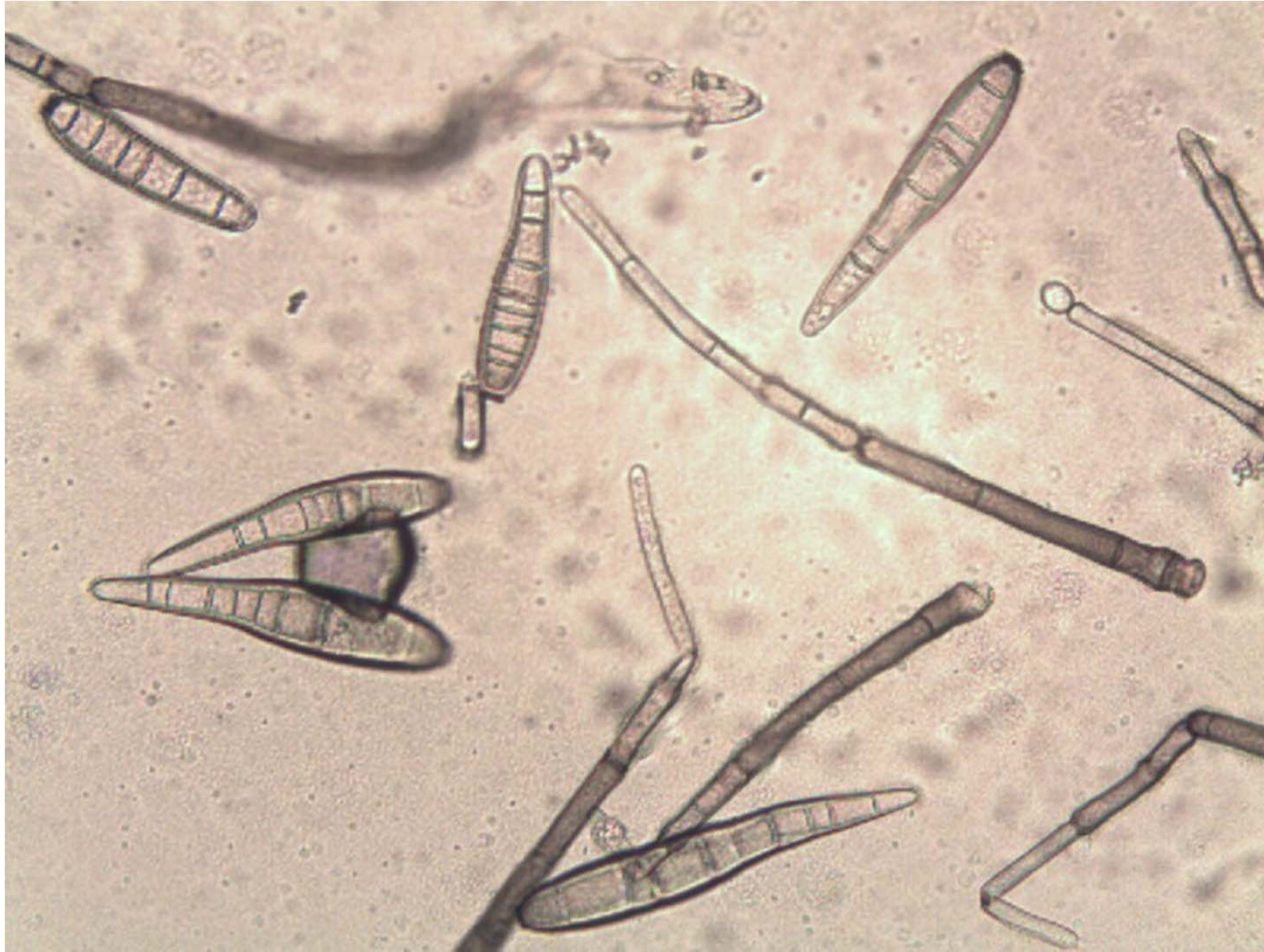


Leaf Spot Diseases in Decatur County (likely *Corynespora* and/or *Cercospora*) 8 September 2009





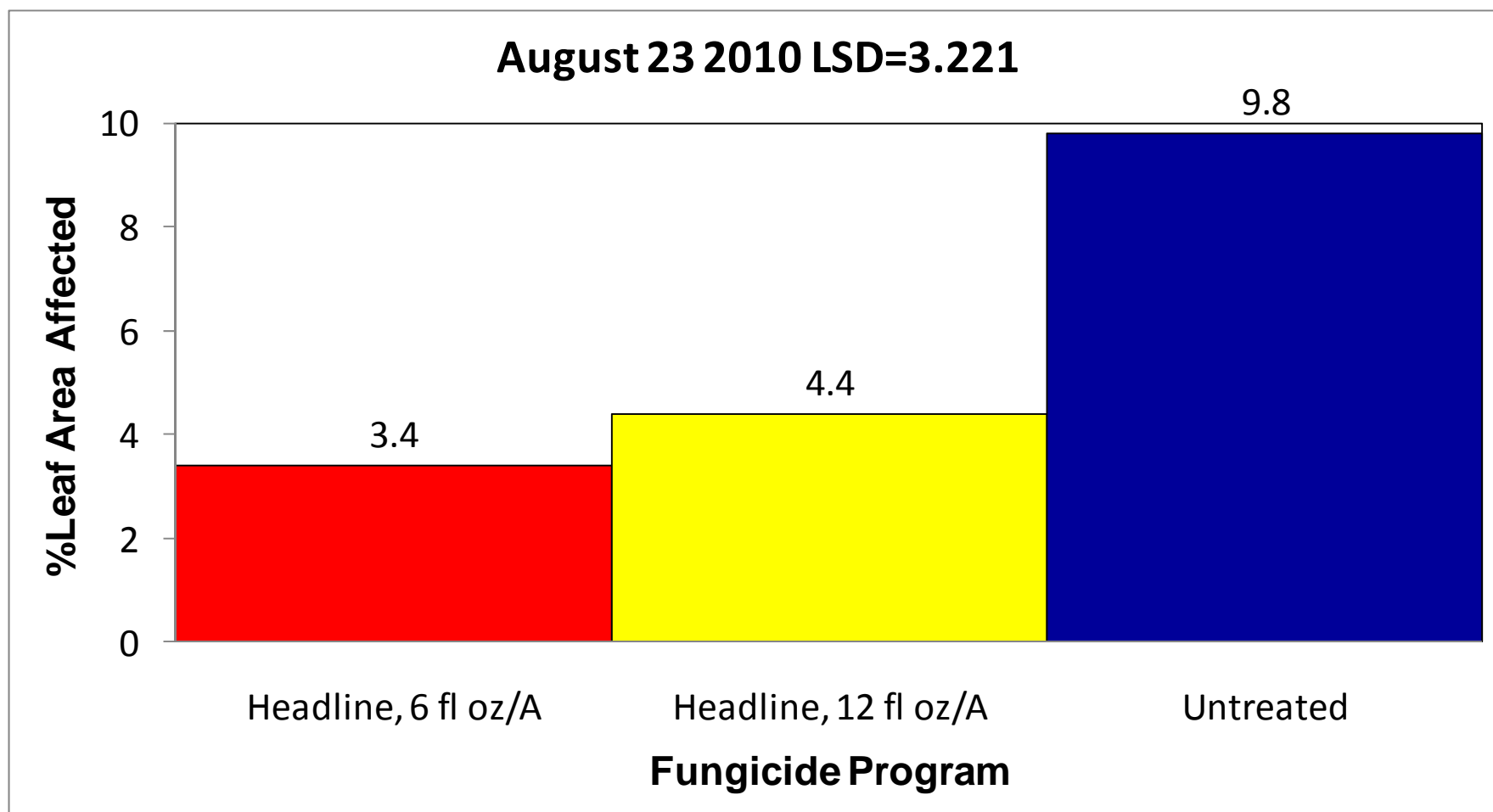
Corynespora cassiicola



2010 Attapulgus REC, Decatur County

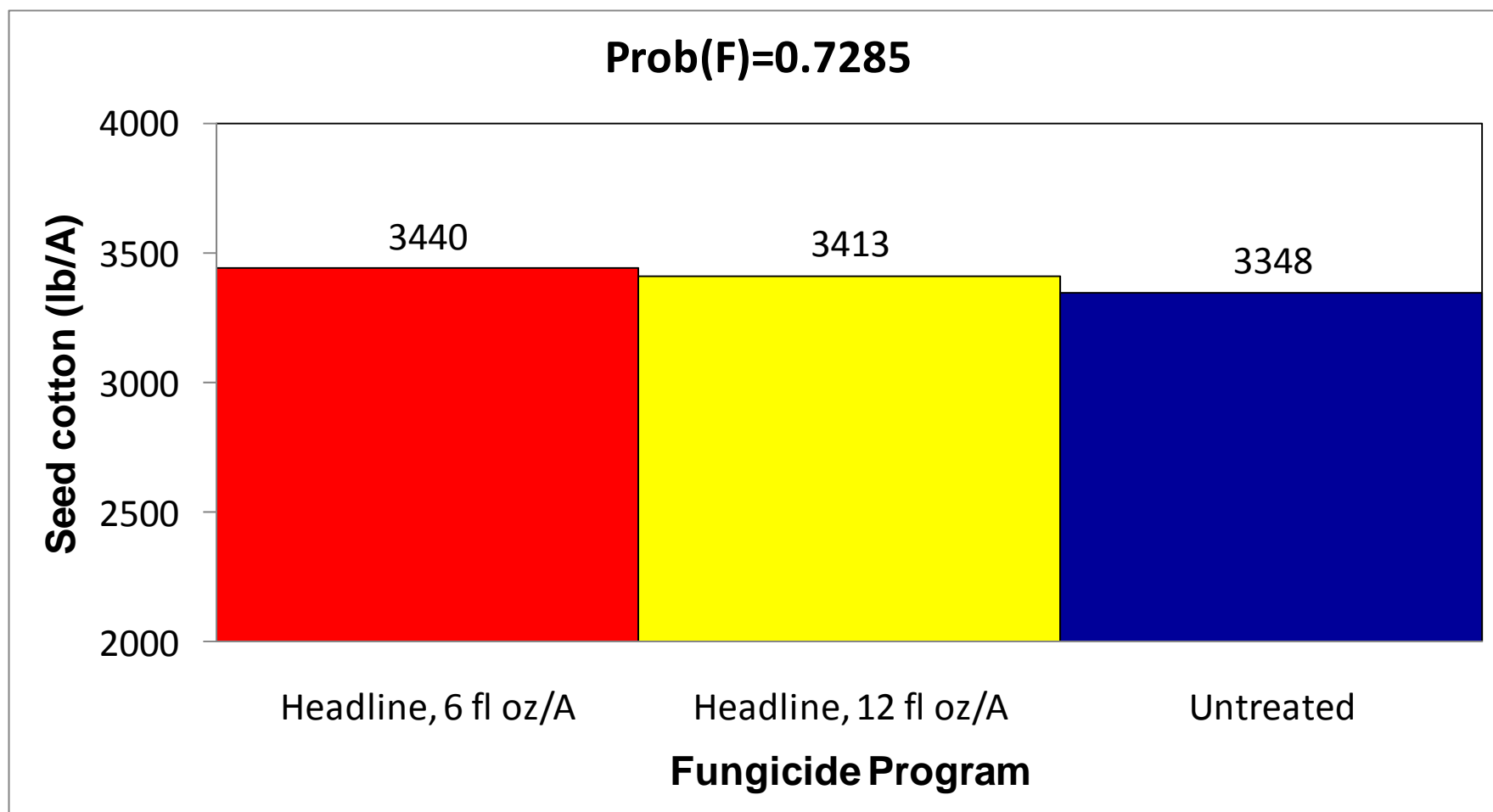
Stemphylium and Corynespora Leaf Spots (Affected leaves only)

Fungicide programs analyzed across cotton varieties



2010 Attapulgus REC, Decatur County

Stemphylium and Corynespora Leaf Spots
Fungicide programs analyzed across cotton varieties



2010 Thomas County
Field stripped with/without Headline 6 fl oz/A

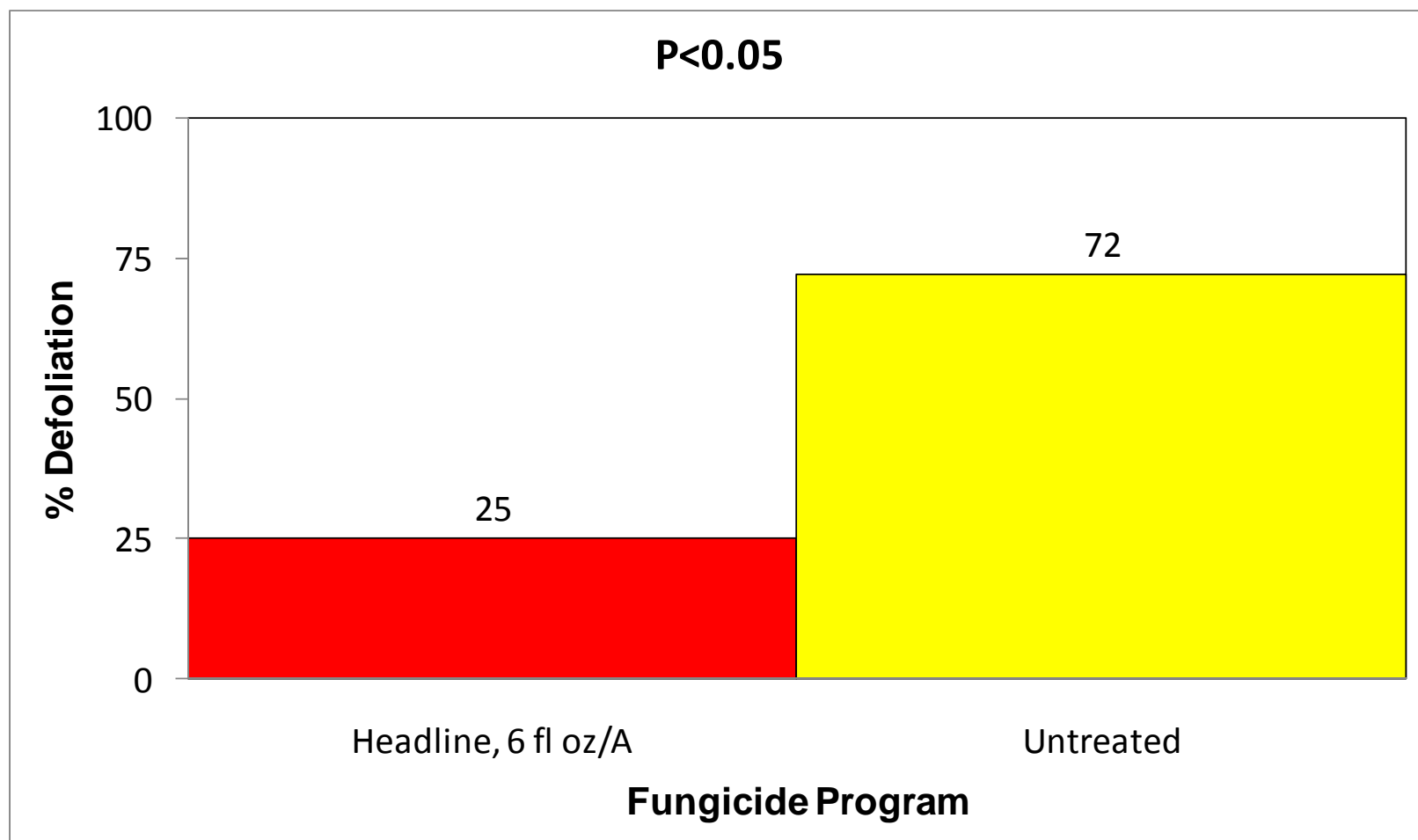


RJ Byrne

2010 Commercial Grower Trial, Thomas County

Corynespora Leaf Spot

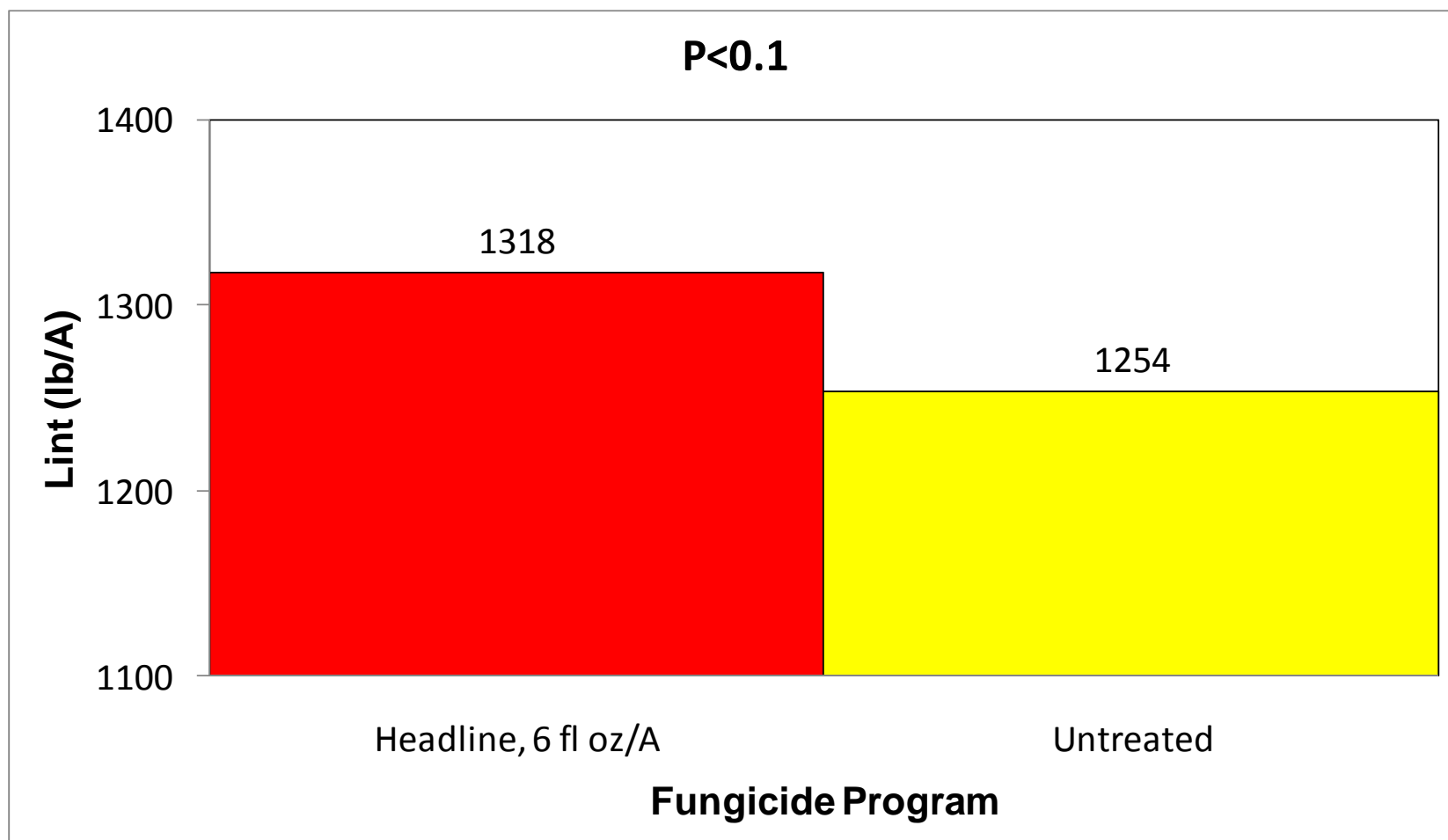
RJ Byrne, UGA Cooperative Extension



2010 Commercial Grower Trial, Thomas County

Corynespora Leaf Spot

RJ Byrne, UGA Cooperative Extension



Through a glass, darkly.....

- Stemphylium leaf spot.
 - Neither disease severity nor defoliation affected by fungicides.
 - Yield not affected by fungicide applications.
 - Disease severity and defoliation significantly affected by pre-plant application of potassium but in-season foliar application of potassium.
- Corynespora leaf spot disease
 - Disease severity and defoliation reduced with application of fungicides.
 - Yields increased with application of fungicides, statistically significant (64 lb/A lint) in one trial.
 - **Best timing.....**
 - **Best fungicides....**
 - **Best recommendations.....**
 - **Best economics.....**
 - **Boll rots.....**

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- **Corynespora leaf spot**
 - J.P. Jones 1963
 - Southwest Asia- to
 - Include boll rots



Ascochyta wet weather blight

Aereolate mildew, Appling Trial 2007



Acknowledgements

– BASF

- Calvin Perry
- Billy Mills
- Jared walls
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- Jhen Bennett



Cotton
Incorporated

