

THROUGH A GLASS, DARKLY



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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



Stemphylium Leaf Spot on Cotton

Seminole County 2009



Rome Ethredge

Leaf Spot Disease in Attapulgus

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. The word "TOPSIN" is in large, bold, black capital letters, followed by a registered trademark symbol. The letter "M" is also in large, bold, black capital letters. Below "TOPSIN" and "M" is a green horizontal bar with the word "FUNGICIDE" in white, spaced-out capital letters.The logo for Headline fungicide. The word "Headline" is in a large, blue, stylized font with a yellow outline. Below it, the word "fungicide" is in a smaller, yellow, lowercase font.The logo for Quadris Fungicide. The word "Quadris" is in a large, bold, purple font. Below it, the word "FUNGICIDE" is in a smaller, blue, all-caps font.

2007 Appling County Fungicide Trial

Photograph by Sandy Newell

Untreated Plot/Areolate Mildew



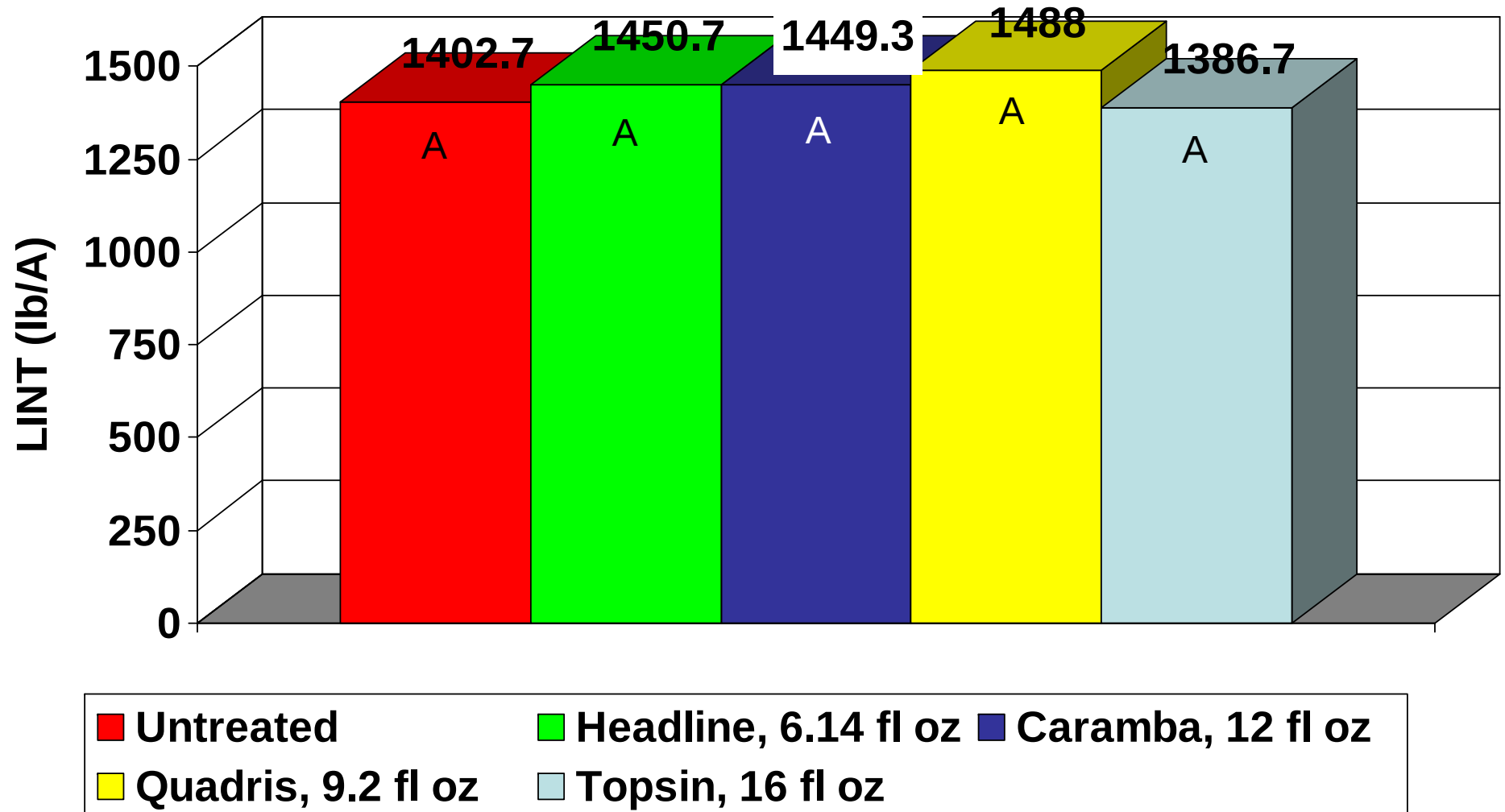
2007 Appling County Fungicide Trial

Photograph by Sandy Newell

Pyraclostrobin mid-canopy/Areolate Mildew



Appling County Fungicide Trial 2007



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

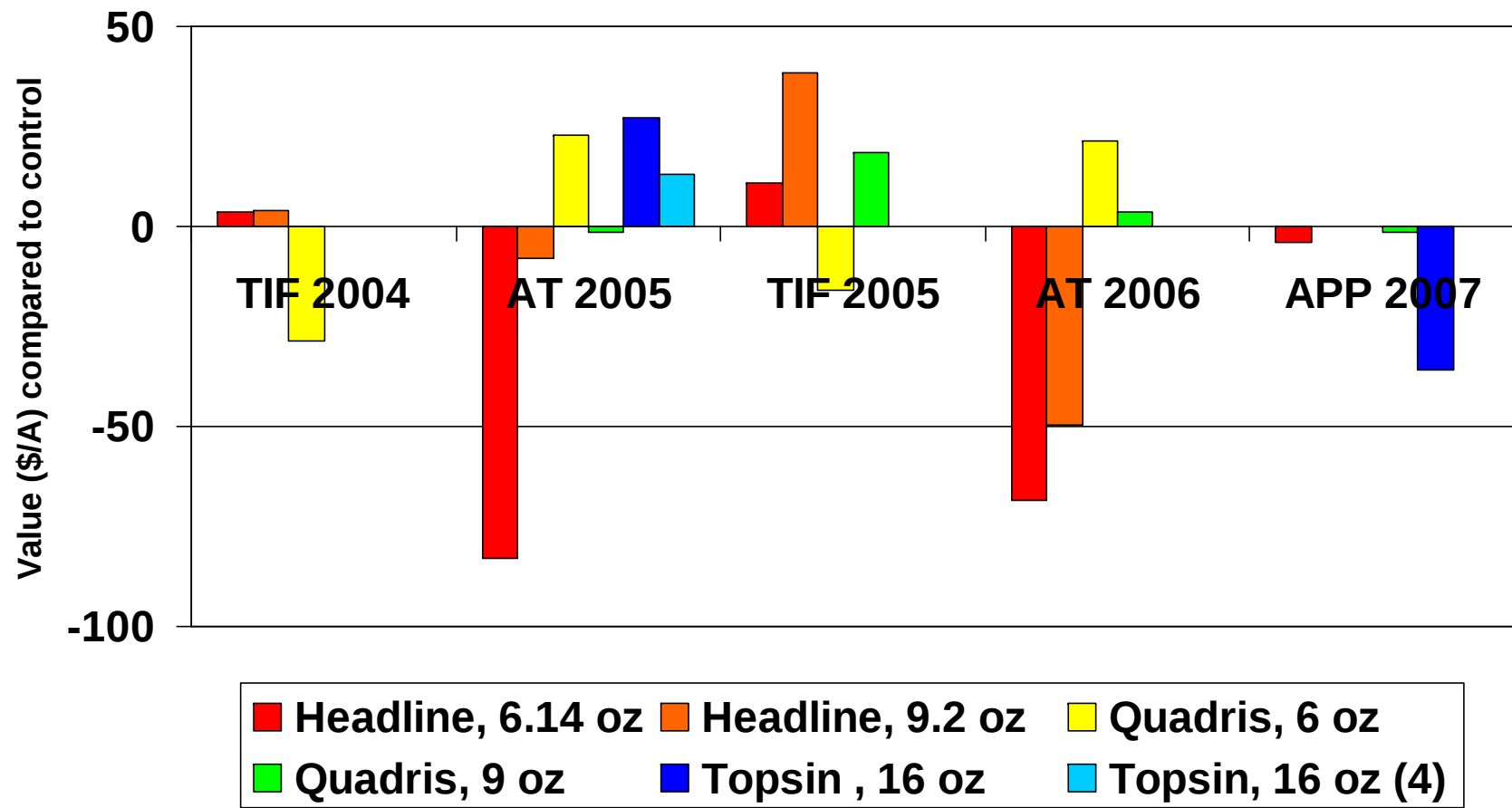


Stemphylium leaf spot 2010

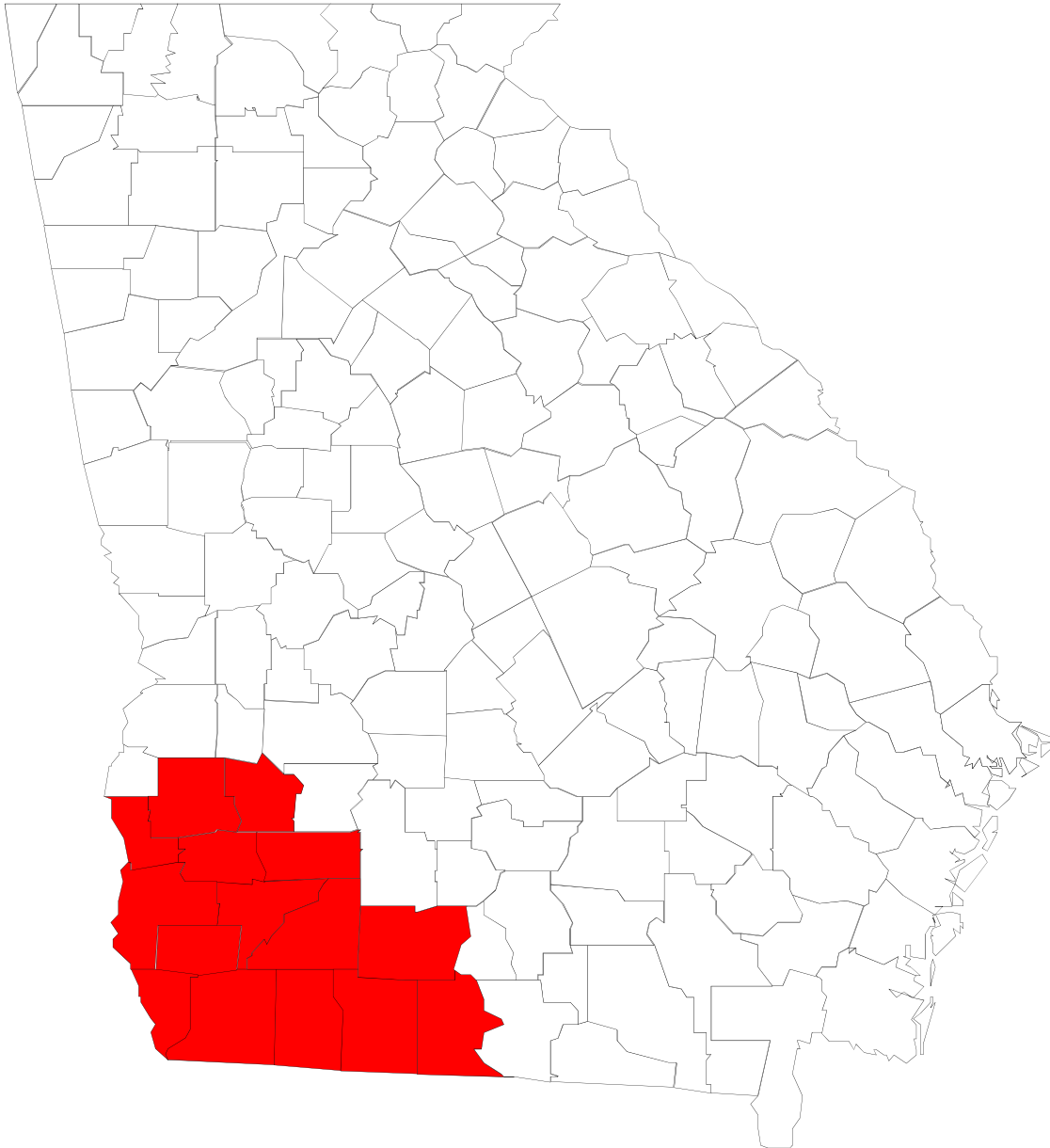
Cotton Fungicide Studies

2004 + 2005 Tifton, 2005 + 2006 Attapulcus, 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"

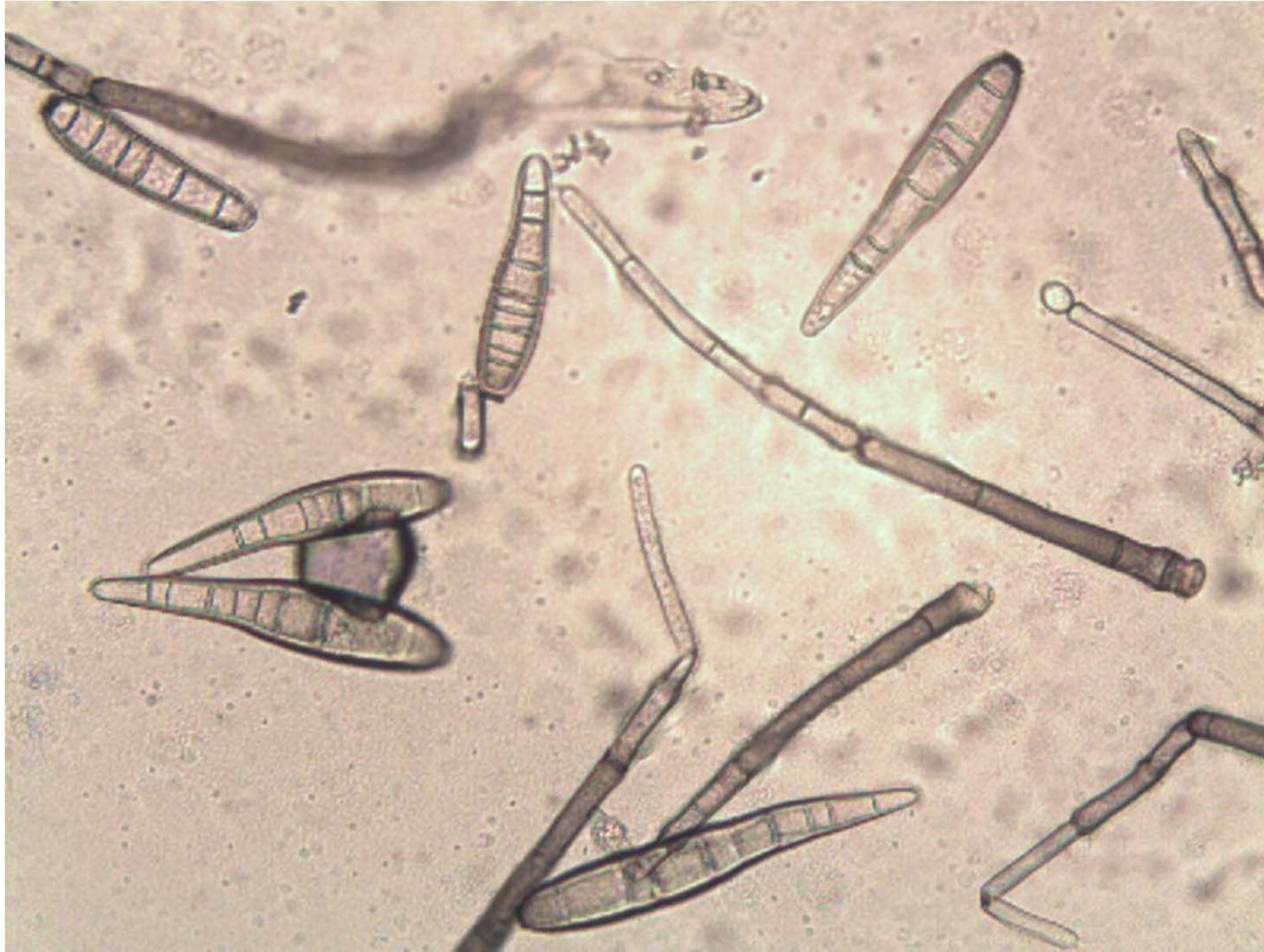


Leaf Spot Diseases in Decatur County (likely *Corynespora* and/or *Cercospora*) 8 September 2009





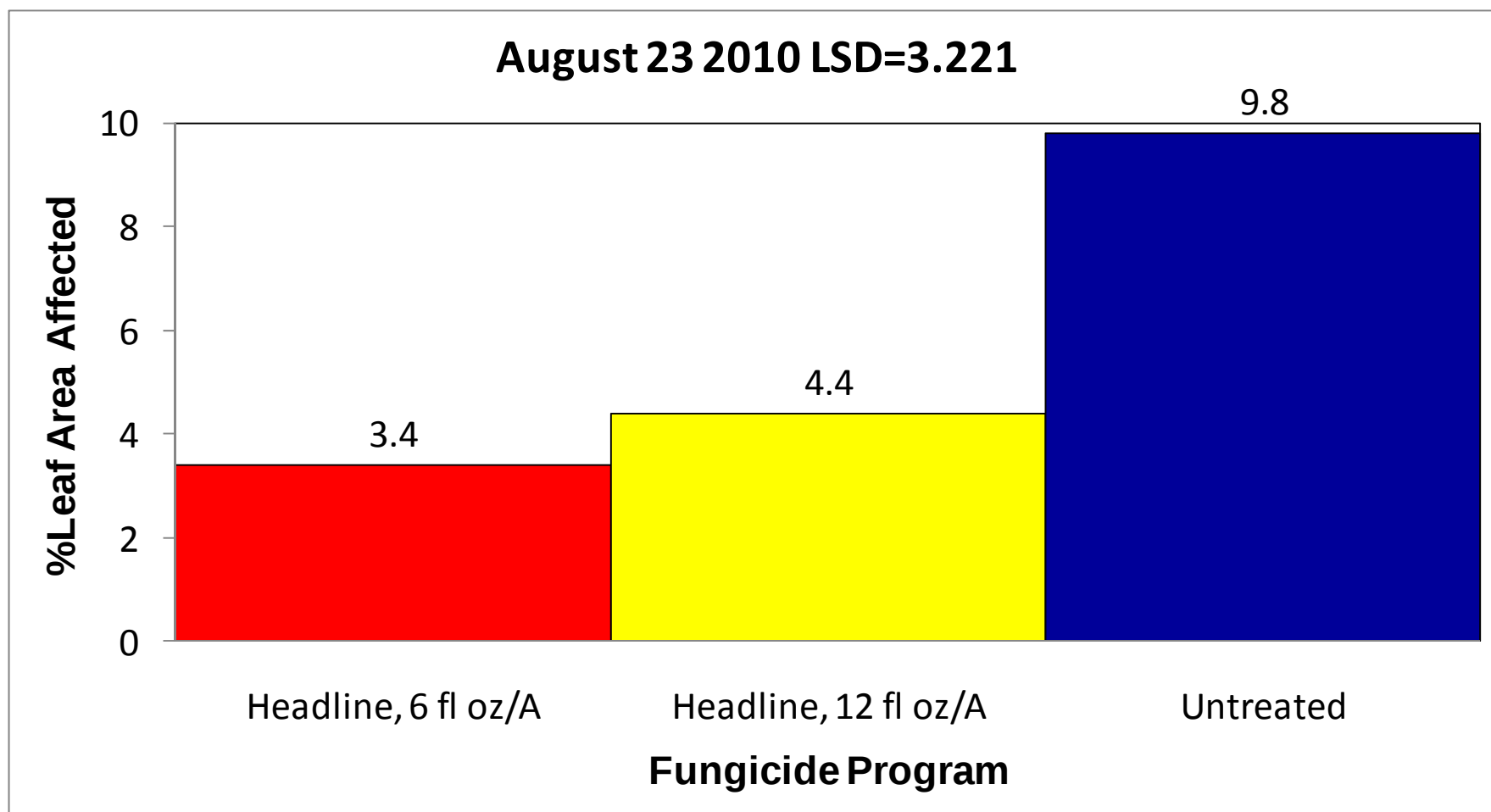
Corynespora cassiicola



2010 Attapulgis REC, Decatur County

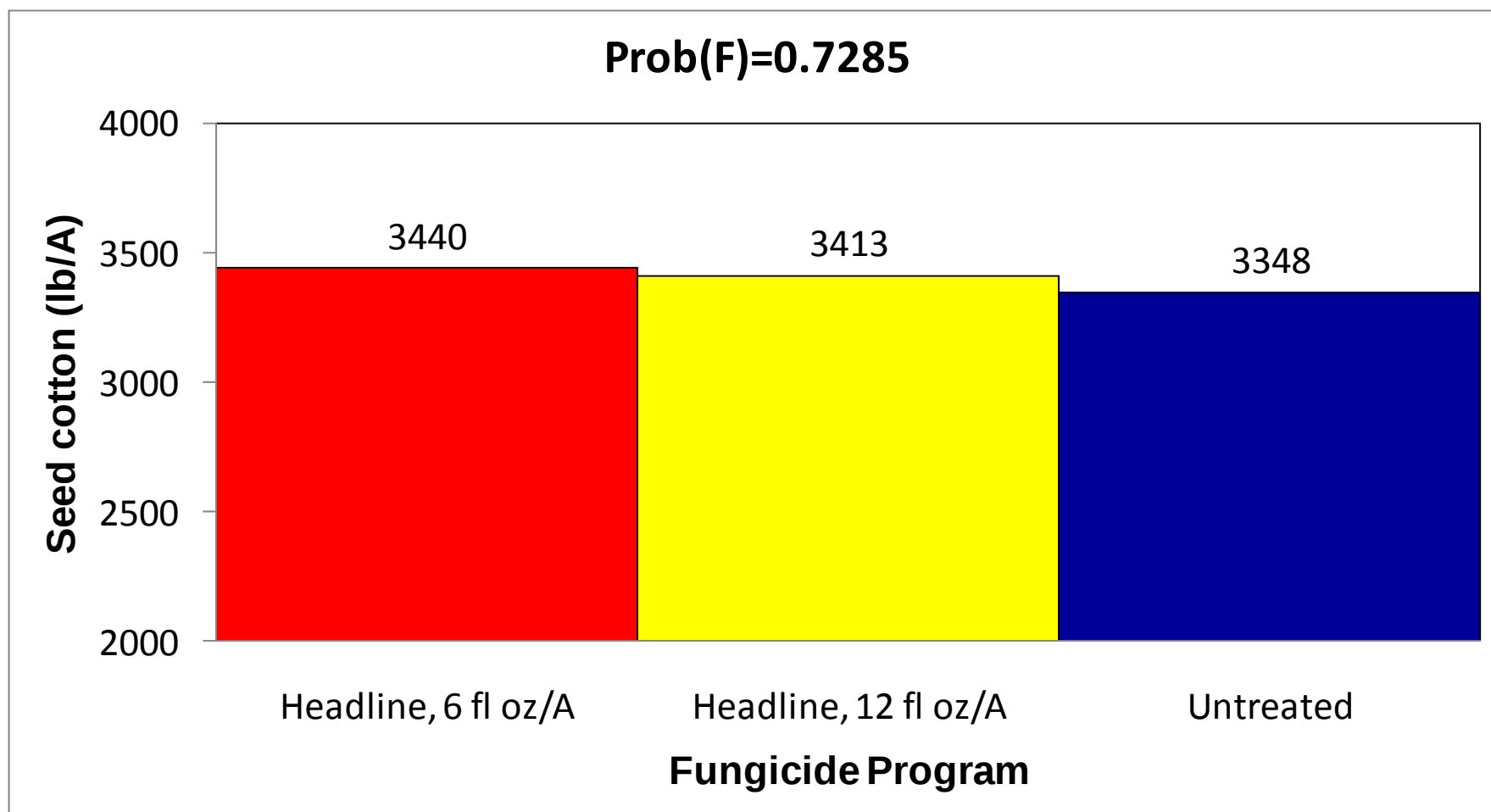
Stemphylium and Corynespora Leaf Spots (Affected leaves only)

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

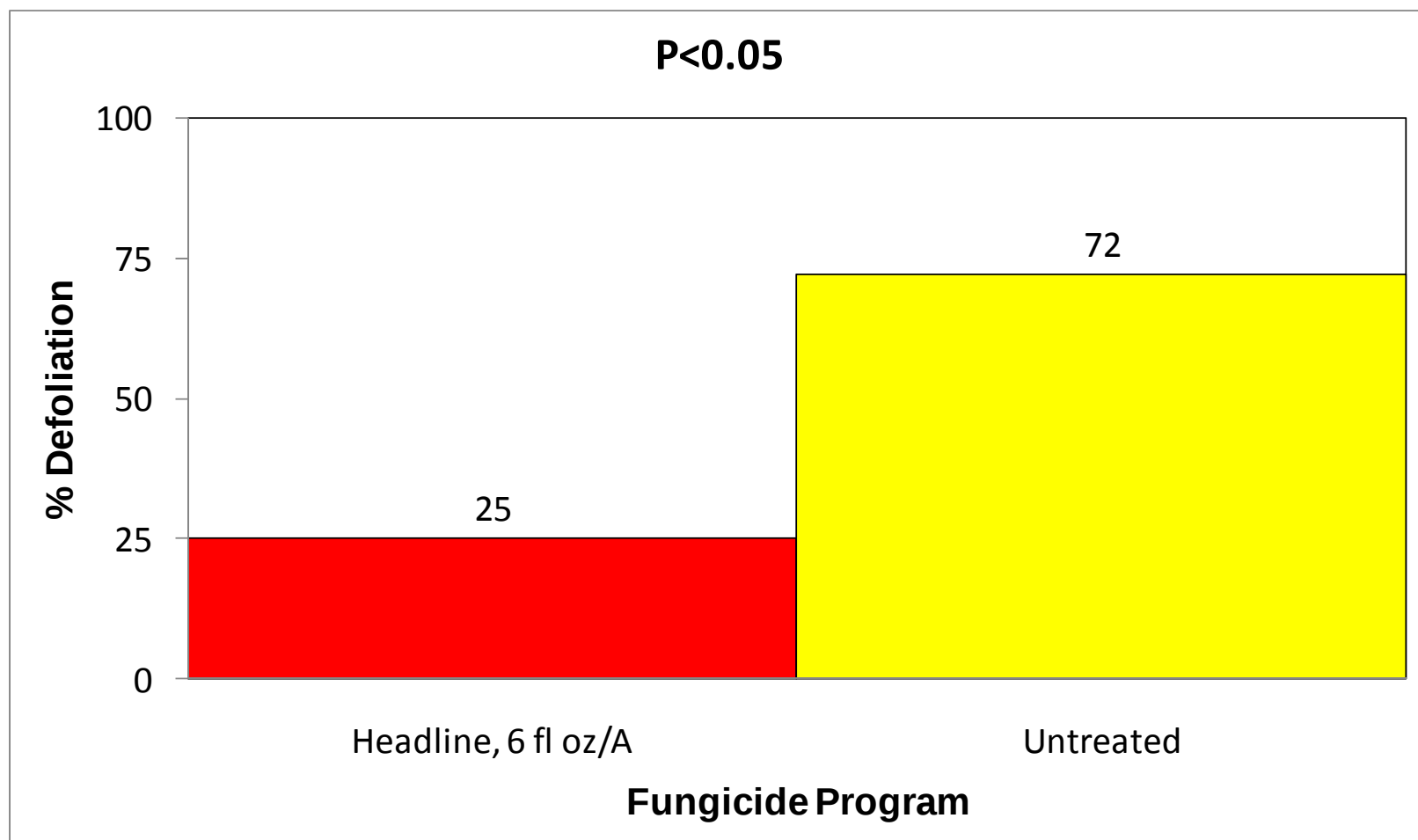


RJ Byrne

2010 Commercial Grower Trial, Thomas County

Corynespora Leaf Spot

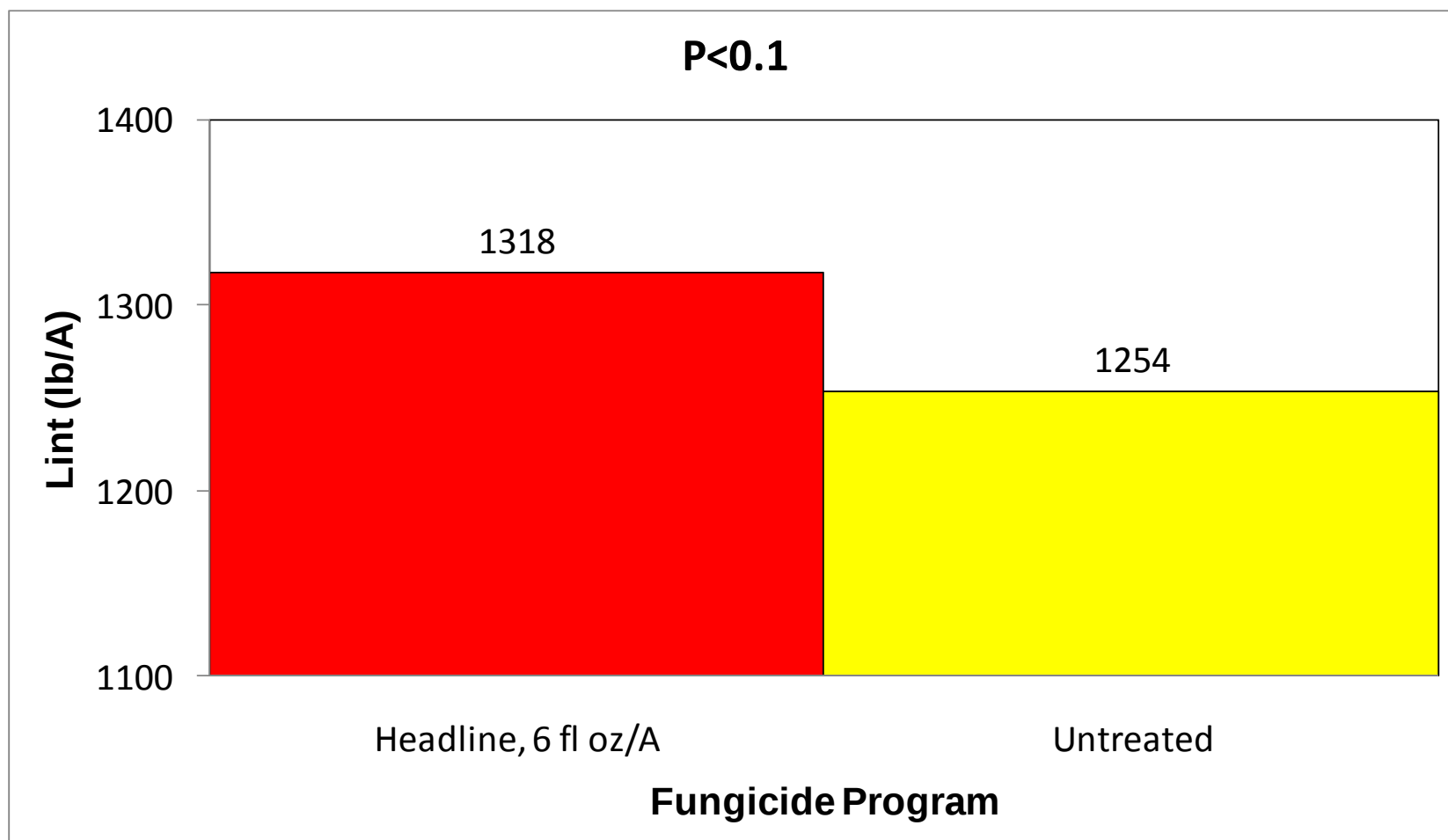
RJ Byrne, UGA Cooperative Extension



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



Ascochyta wet weather blight



Acknowledgements

– BASF

- Calvin Perry
- Billy Mills
- Jared walls
- Michael Foster
- Lina Young
- Joy Carter
- Jeannette Mixon
- Benji Baldree
- Jhen Bennett



Cotton
Incorporated

