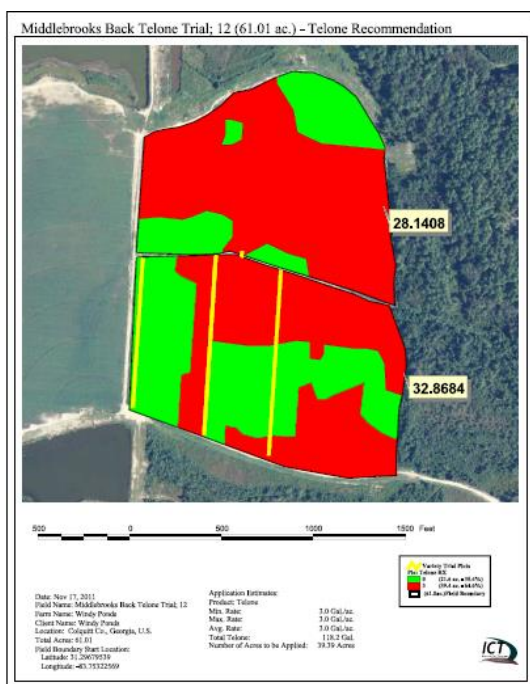
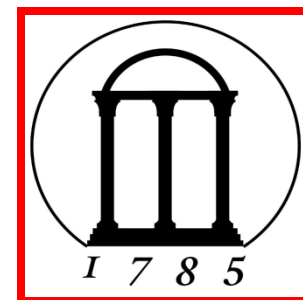


Epidemiology and Susceptibility of Varieties GEORGIA in 2016



Dr. Bob Kemerait
Department of Plant Pathology
The University of Georgia



Bacterial Blight in Georgia

- 2000-2014 this disease was seen only incidentally and, to the best of my knowledge, was never associated with a complaint.
- Southern root-knot nematodes are of significant concern for cotton producers.
 - Increasing interest in resistant varieties.
- Beginning in approximately July 2015, frequent troubleshooting calls regarding bacterial blight.
 - Disease largely confined to DP 1458NR B2RF
 - No obvious reason why the disease occurred this year
 - Initial message, “not seedborne and 1458 is not more susceptible”.
 - In worst fields, lint losses estimated from 100-200 lb/A



A STRONG EL NIÑO'S IMPACT ON WINTER

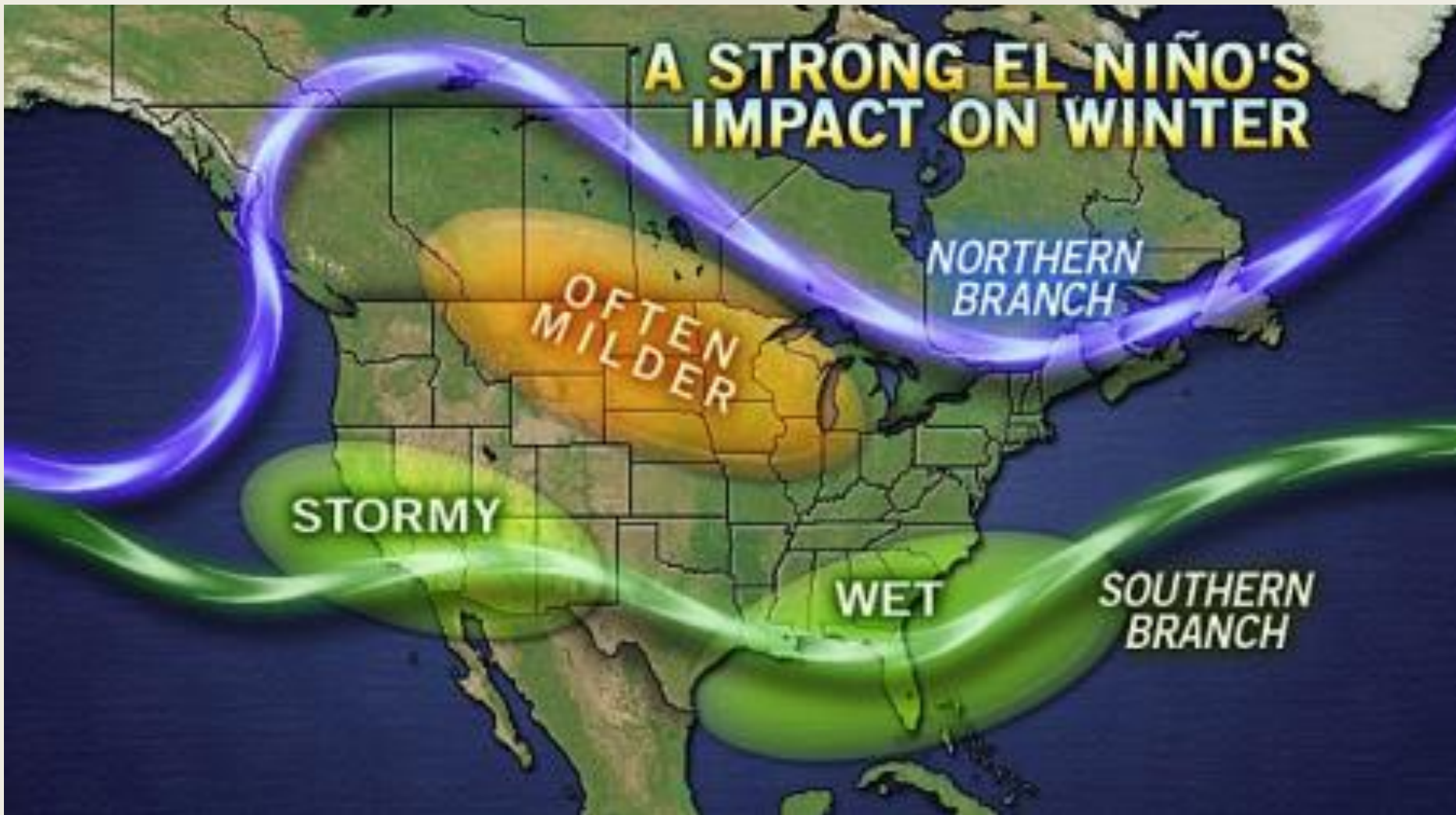
NORTHERN
BRANCH

OFTEN
MILDER

STORMY

WET

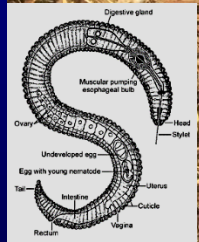
SOUTHERN
BRANCH



Considerations for El Nino

- Impact of El Niño in the Southeastern USA.
- Rainfall this winter should be wetter and, possibly, cooler (warmer??) than normal.
- Impact of warmer temperatures on nematodes.
- Wet soils at spring planting??
 - Delayed planting.
 - Problems with fumigation.
 - Diseases (Rhizoctonia seedling disease)





Nematodes continue to feed on living roots, 21-day life cycle.

Nematodes reported to continue feeding until soil 65F

Nematodes reported to stop development soil below 50F



Symptoms of *M. incognita* on cotton



What do we do about Fusarium Wilt?



Managing nematodes is a headache....

- **SEED**

- Make sure it is root-knot..... And yield.....

- **SEED TREATMENTS**

- Convenient, but often not enough



- **NEMATICIDES**

- **Vydate CLV:** looks good in Mississippi.....

- **Telone II:** by FAR our best nematicide, but can be a bit like Goldilocks... “too wet... too dry”

- **Temik 15G:** Gone with the Wind, “Frankly my dear..”

- **Velum Total:** Promising.....

Resistance versus Tolerance

- Partial resistance to **Southern Root-Knot Nematodes**
- PHY 427 WRF (2 genes)
- **PHY 487 WRF (2 genes)**
- PHY 367 WRF (1 gene)
- ST 5458 BRF (1 gene)
- **ST 4946 GLB2 (1 gene)**
- DPL 1454 NR B2RF (2 genes)
- **DPL 1558 NR B2RF (2 genes)**



Bayer CropScience



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Bayer CropScience



Colquitt County ANR Agent



2015 and DPL 1454 NR B2Rf Angular Leaf Spot - Bacterial Blight



Foliar Symptoms from Bacterial Blight Field



What is the value of a leaf?

What is the cost of premature defoliation?

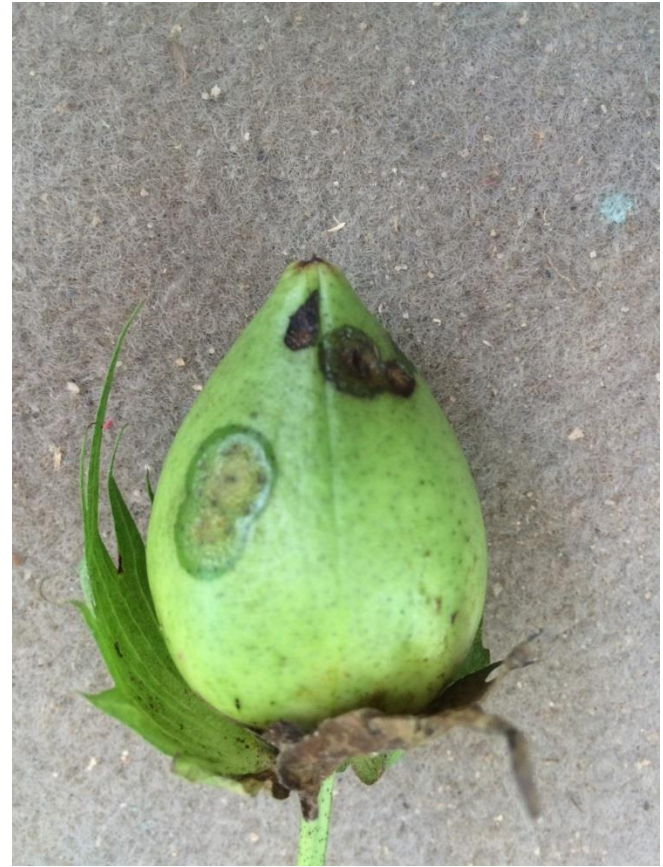
- Leaves critical for growth, development of cotton.
- “Subtending leaves” provide significant nutrition for boll development.
- Young leaves (<23 days) feed themselves.
- Leaves, age 23-60 days, feed the bolls.
- Older leaves no longer active, “sink”
- Continued supply of young leaves needed to finish the crop, maximize yield.

Advanced Symptoms 1454



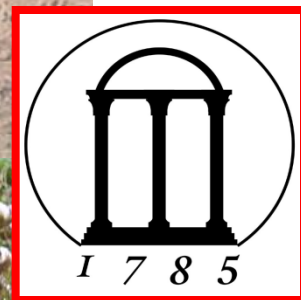
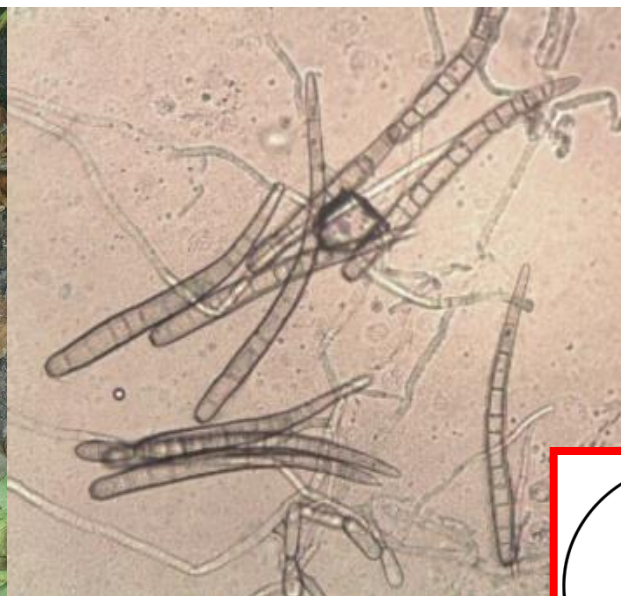
Boll Symptoms







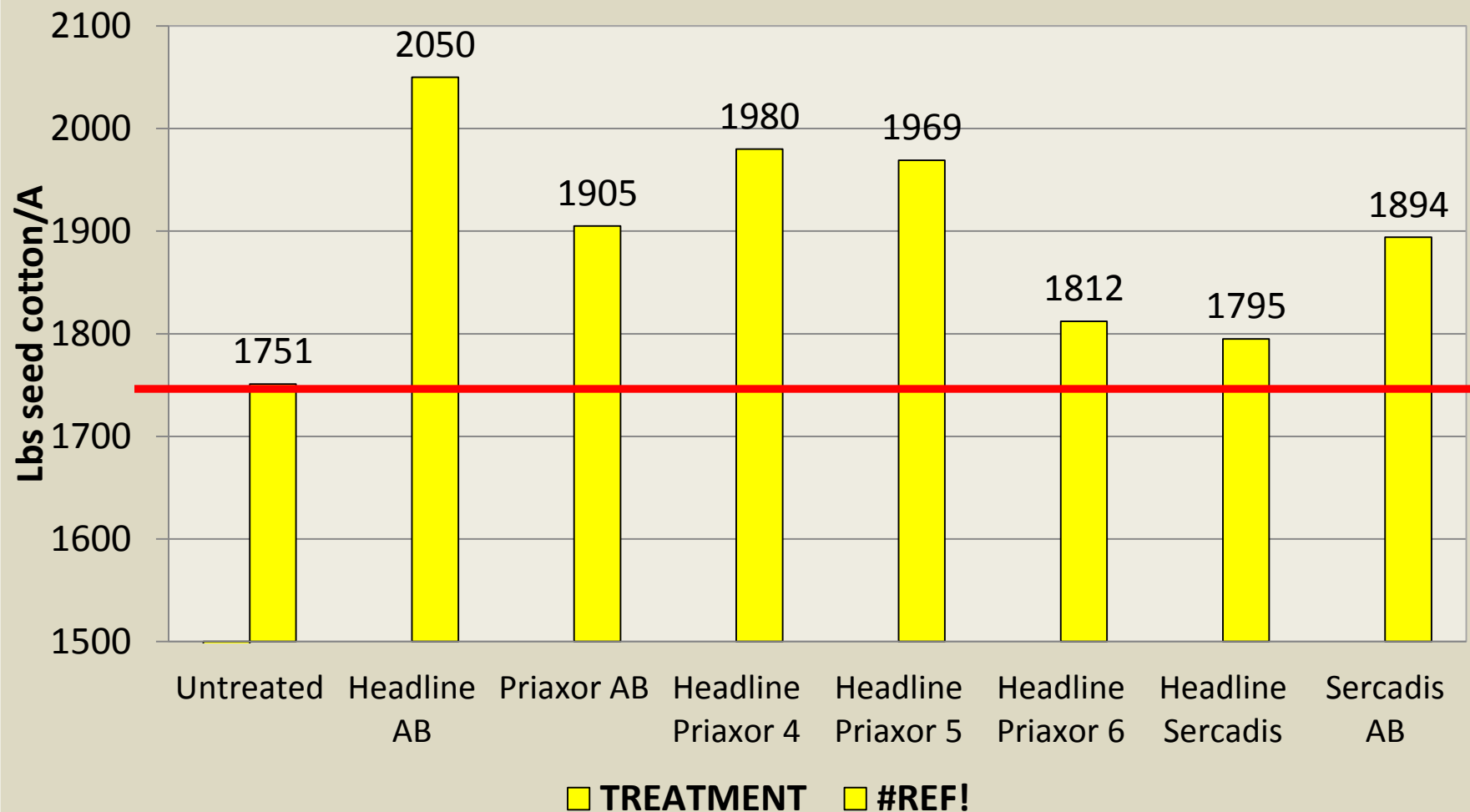
COTTON, TARGET SPOT, and on and on...



2015 BASF Fungicide Study

Target Spot

Yield (lbs seed cotton/A)



The “fall out”

- Bacterial blight was a SIGNIFICANT problem in Georgia’s cotton in 2015.
- Unclear why. No clear environmental link.
- Largely restricted to DP 1454NR B2RF. Could not have been predicted (in my opinion).
- This variety will not be planted in Georgia in 2016.
- Yield losses estimated 100-200 lb/A.
- Crop consultants were most vocal.



QUESTIONS?

