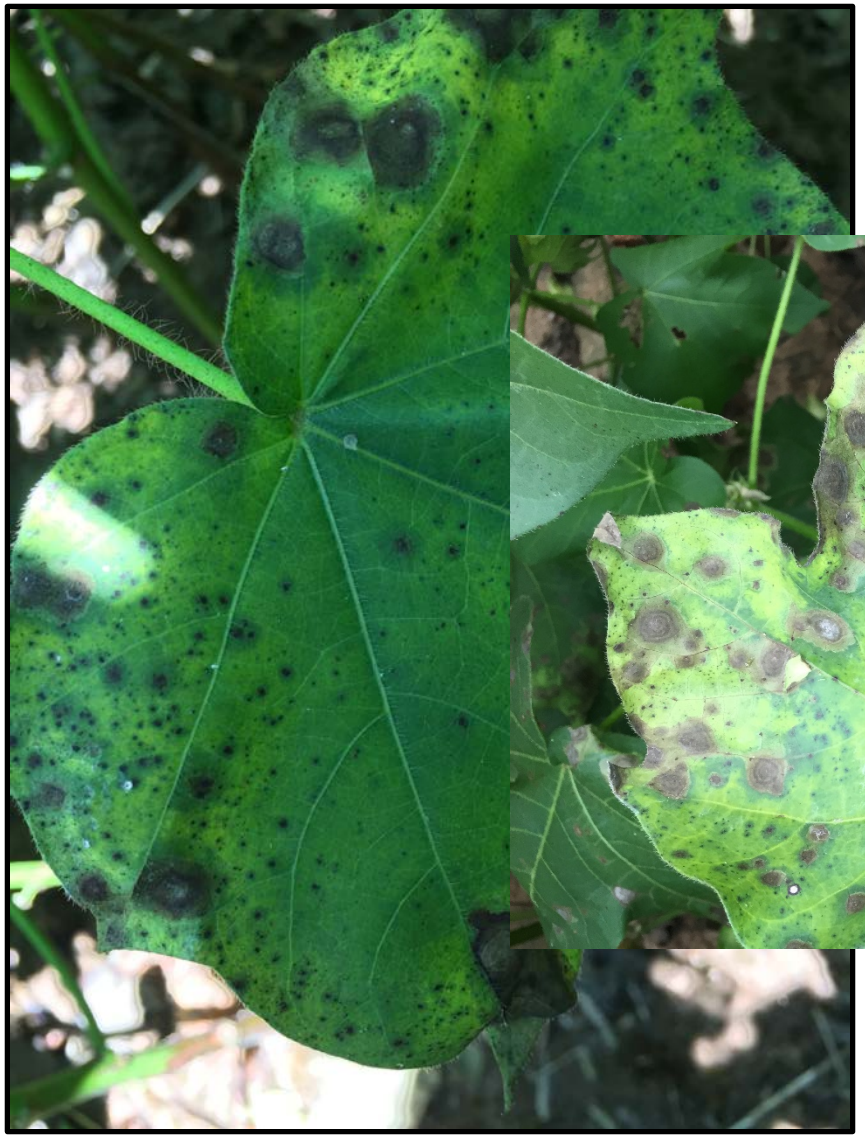
# Factors Involved in Managing Target Spot
# LATMC ‘18

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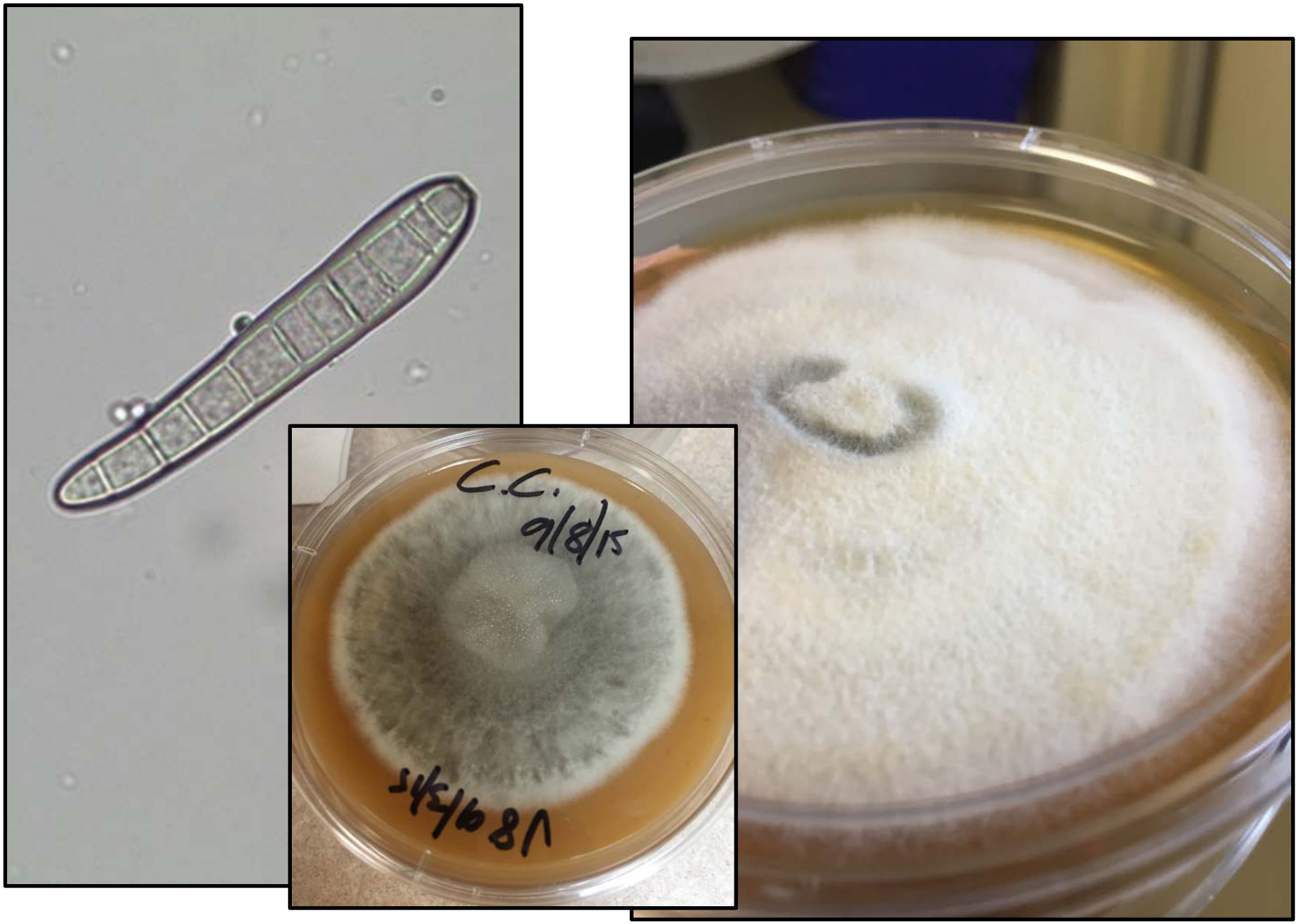
# Target Spot

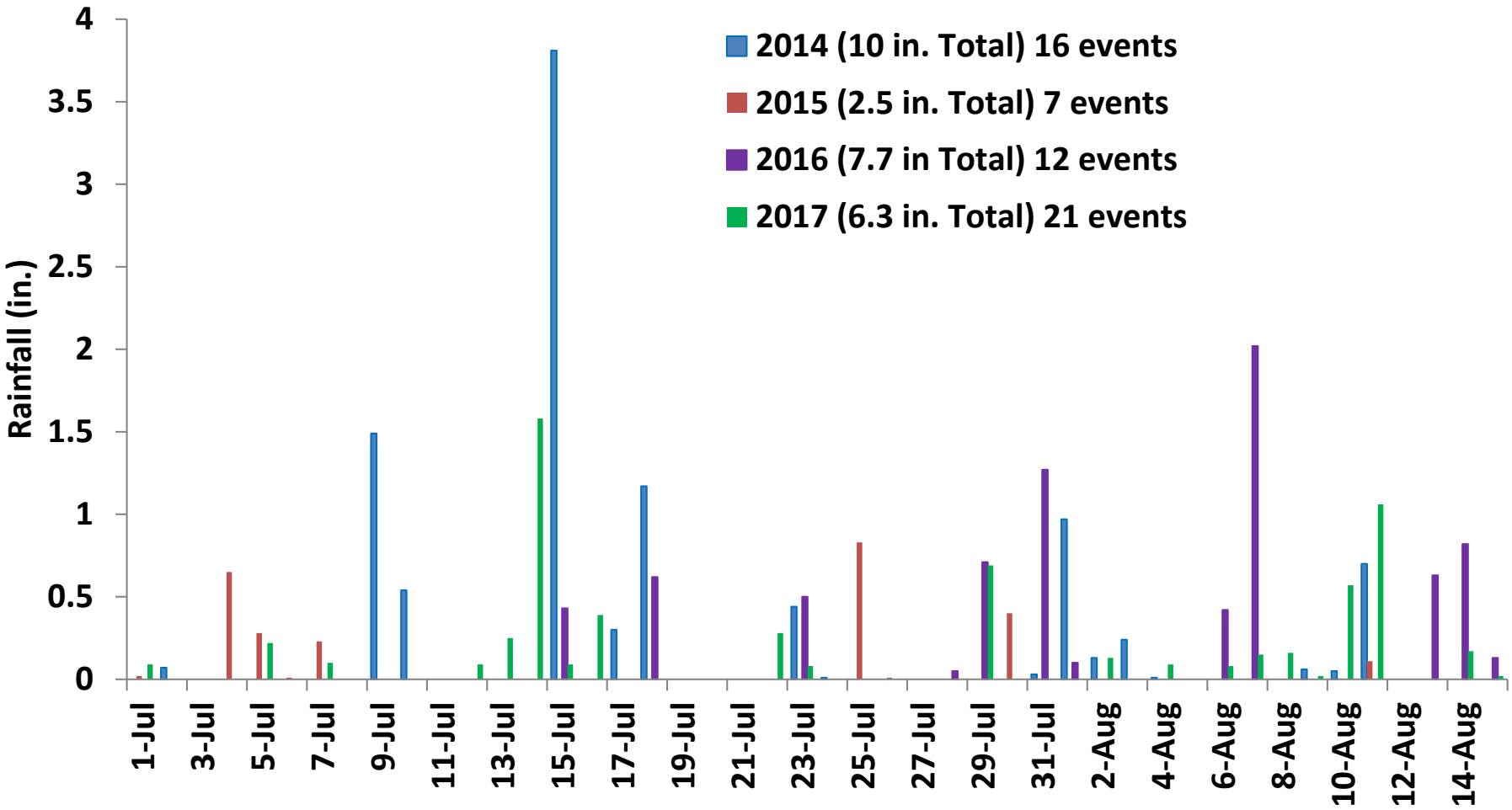
# *Corynespora cassiicola* (Berk. & M. A. Curtis) causes target spot



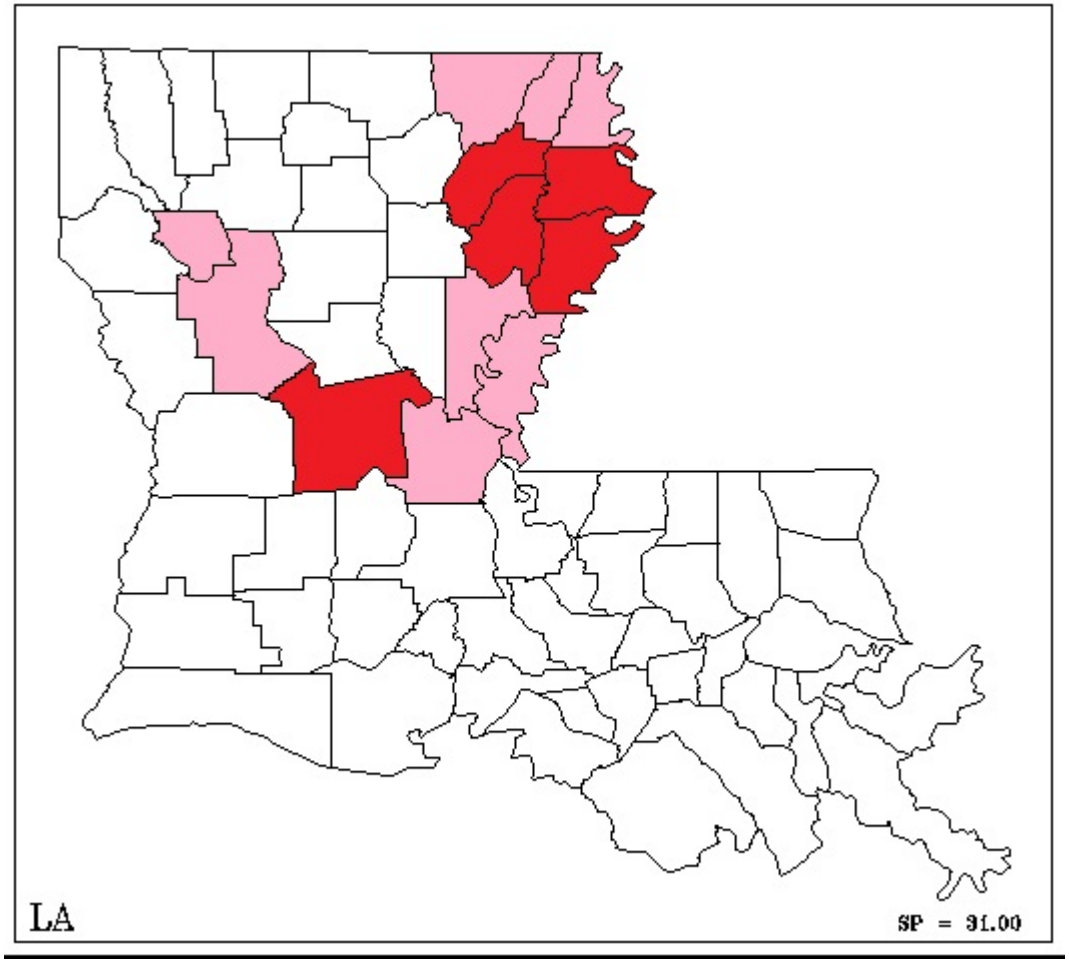
# Epidemiology

- **Hosts:  cucumber, sweet potato, soybean, tomato, cotton**
- **There may be differences among isolates.**
- **Fungus prefers warm conditions with high humidity.**
- **May be a toxin involved with defoliation? (unknown).**
- **The pathogen can overwinter as a saprophyte on debris.**
- **Spores are spread by wind, rain, overhead irrigation, etc.**

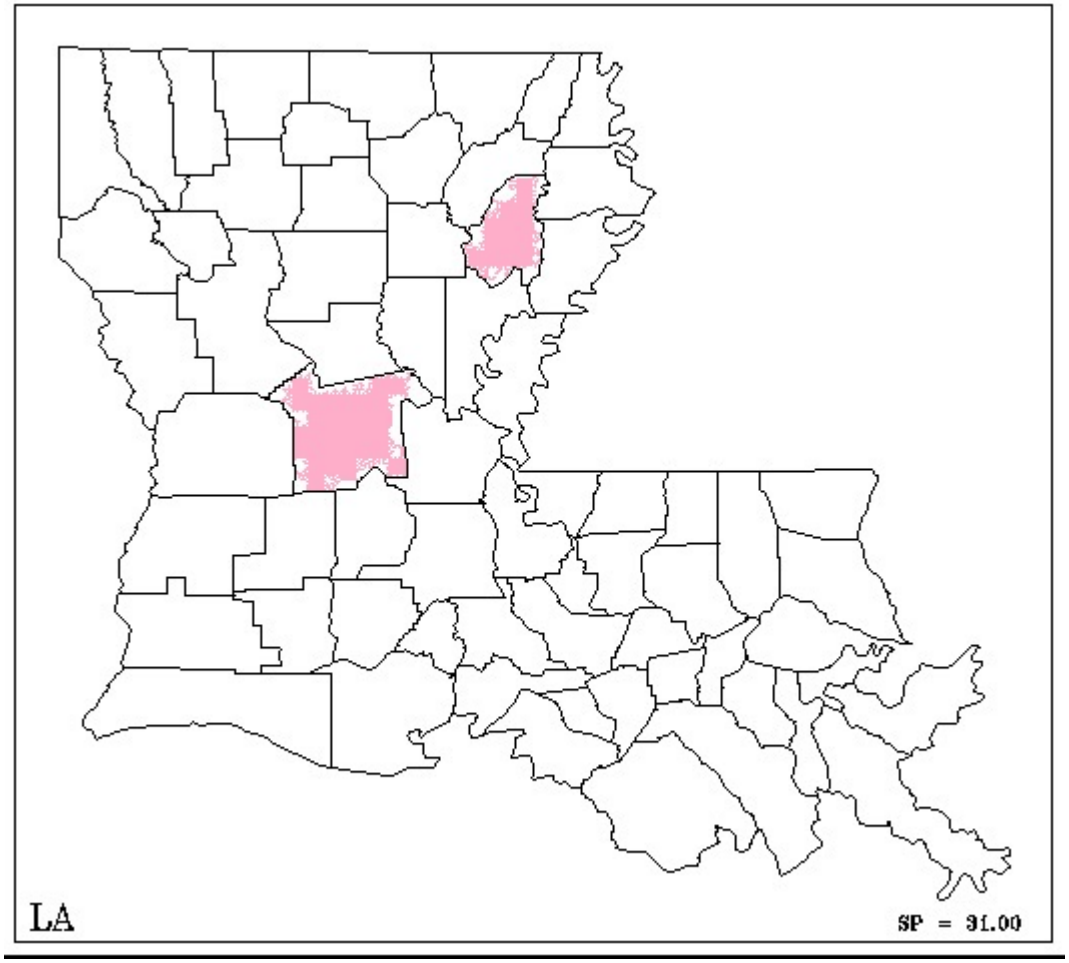
# Rainfall, 2014-2017, Chase, LA



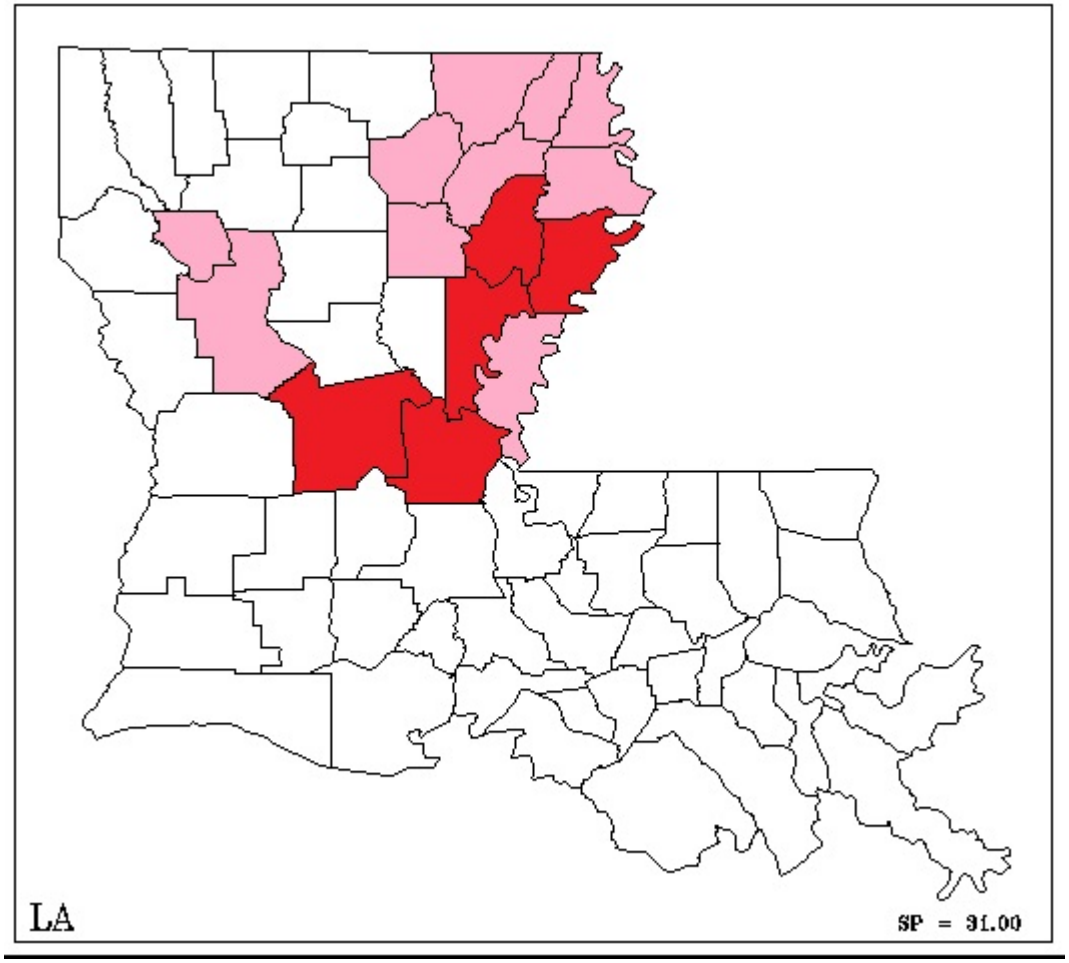
# Target Spot Distribution - 2014



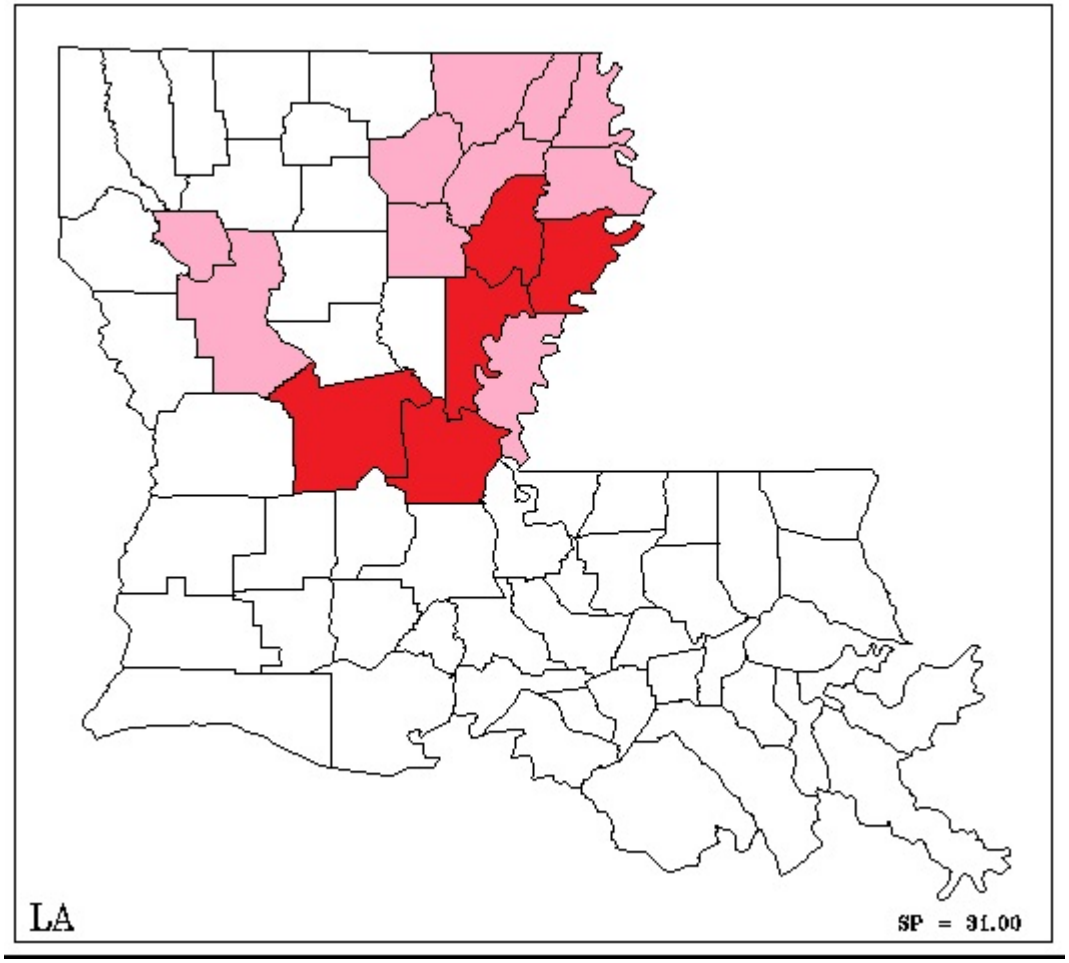
# Target Spot Distribution - 2015



# Target Spot Distribution - 2016



# Target Spot Distribution - 2017



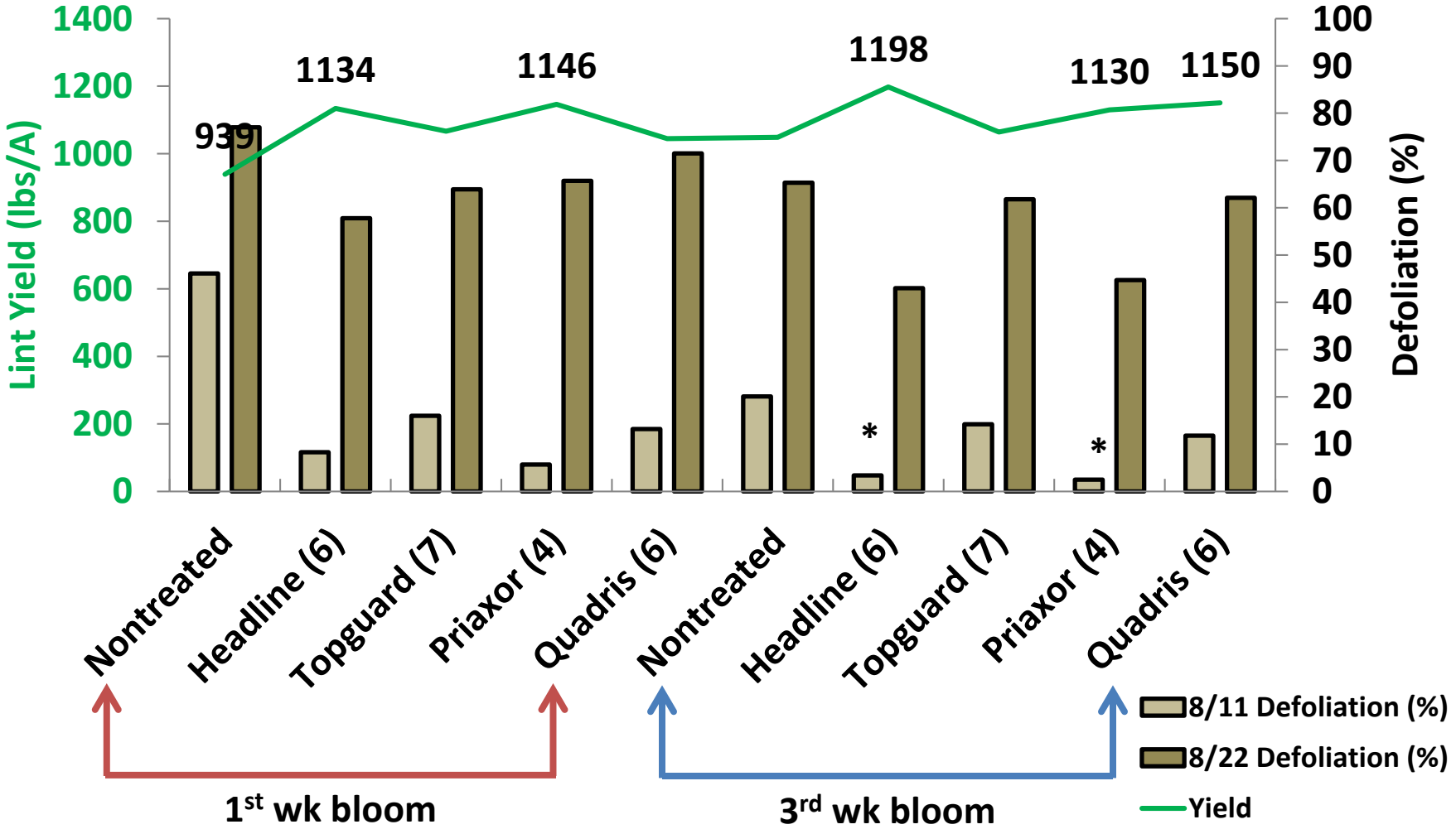
# Multi-year Regional Evaluation of One and Two Applications of Registered and Experimental Fungicides for the Management of Target Spot on Two Cotton Varieties

H. L. Mehl, N. Dufault, M. Mulvaney, A. Hagan, H. Kelly, R. Kemerait, P. Price, T. Allen, and R. L. Nichols

- **1st and or 3rd wk bloom applications**
  - **16 site-years**
  - **1 of 12 locations in '14 and '15 showed significant yield increase**
- **3 of 8 in '16 showed significant yield increase**

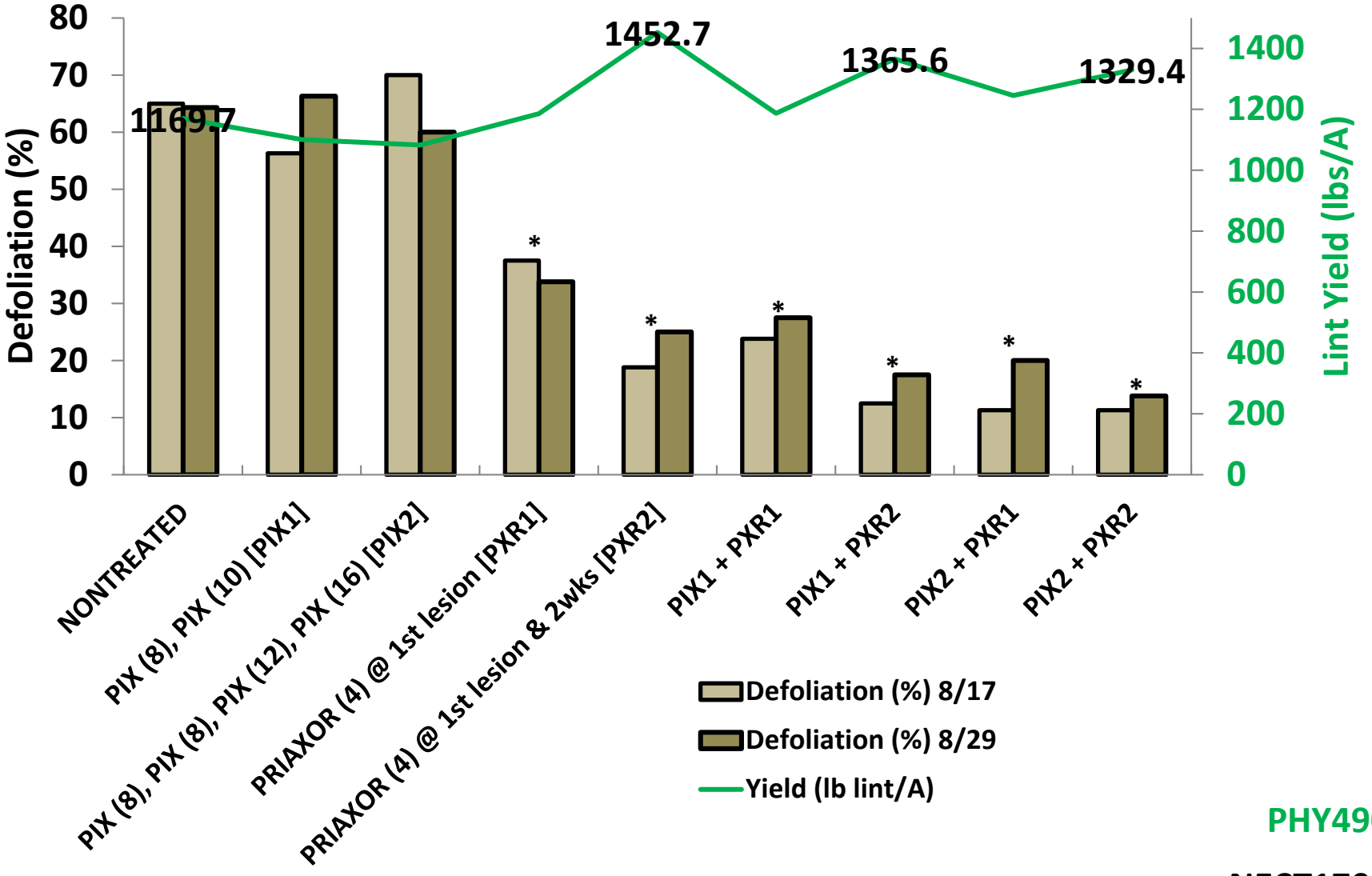
- **AVERAGE YIELD RESPONSE = 5%**

# Regional Fungicide Trial – Winnsboro, LA – 2016 (Target Spot I)




PHY 499
MRCT1607

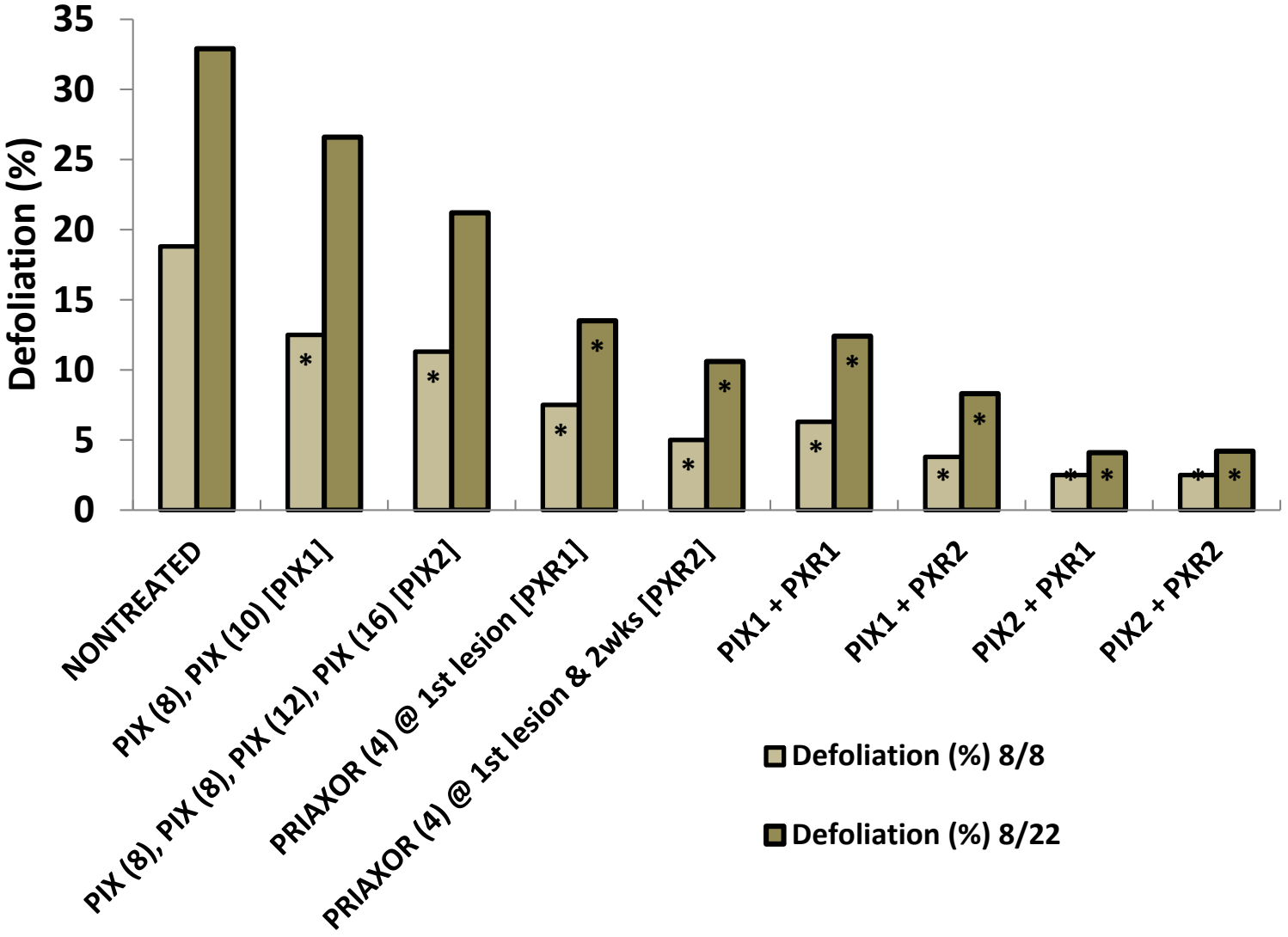
# Regional Trial (Target Spot II)
# St. Joseph, LA – 2017




PHY490

NECT1701

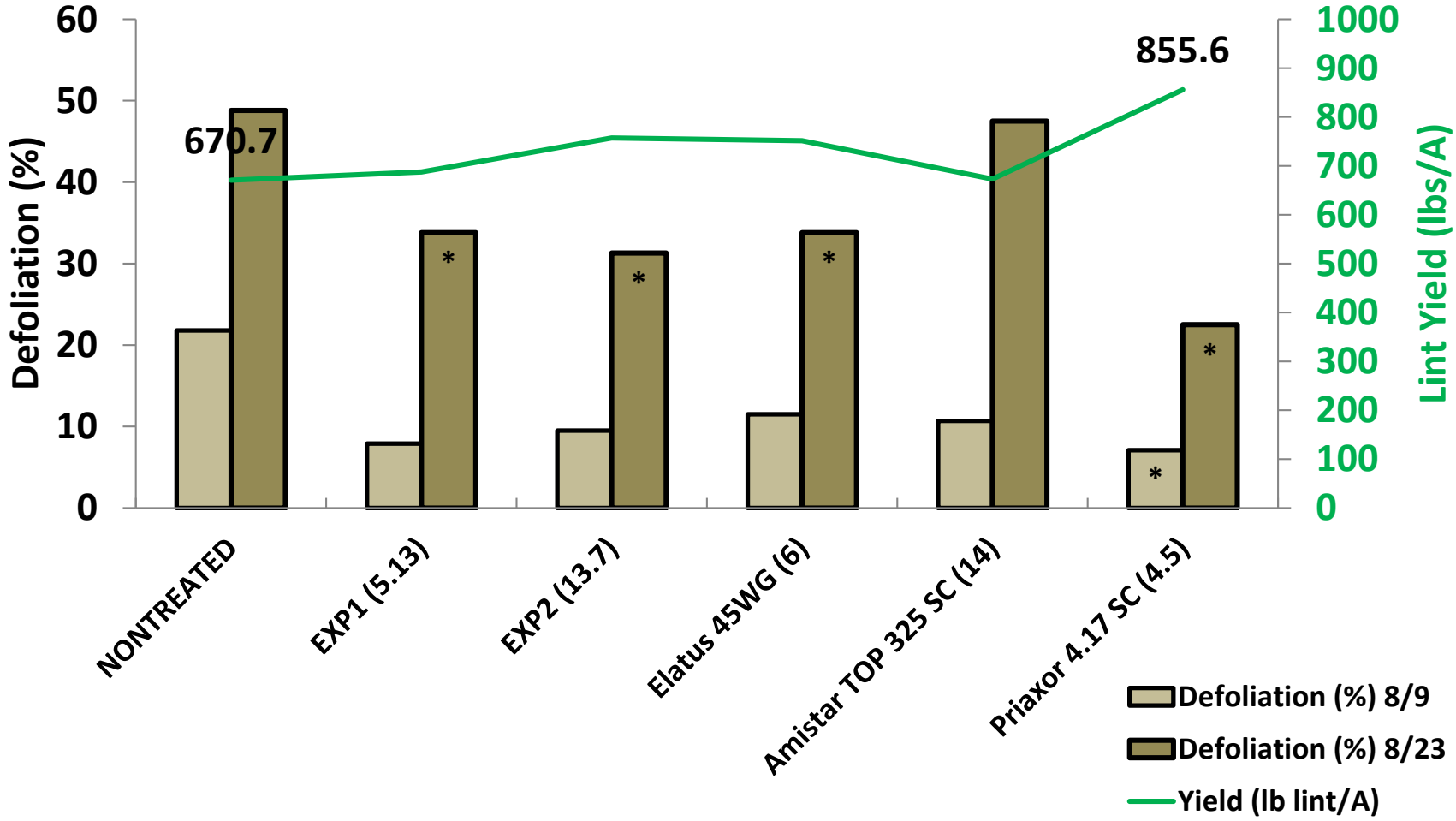
# Regional Trial (Target Spot II)
# Winnsboro, LA – 2017




PHY490

MRCT1709

# Experimental and Commercial Programs for Target Spot – Alexandria, LA – 2017

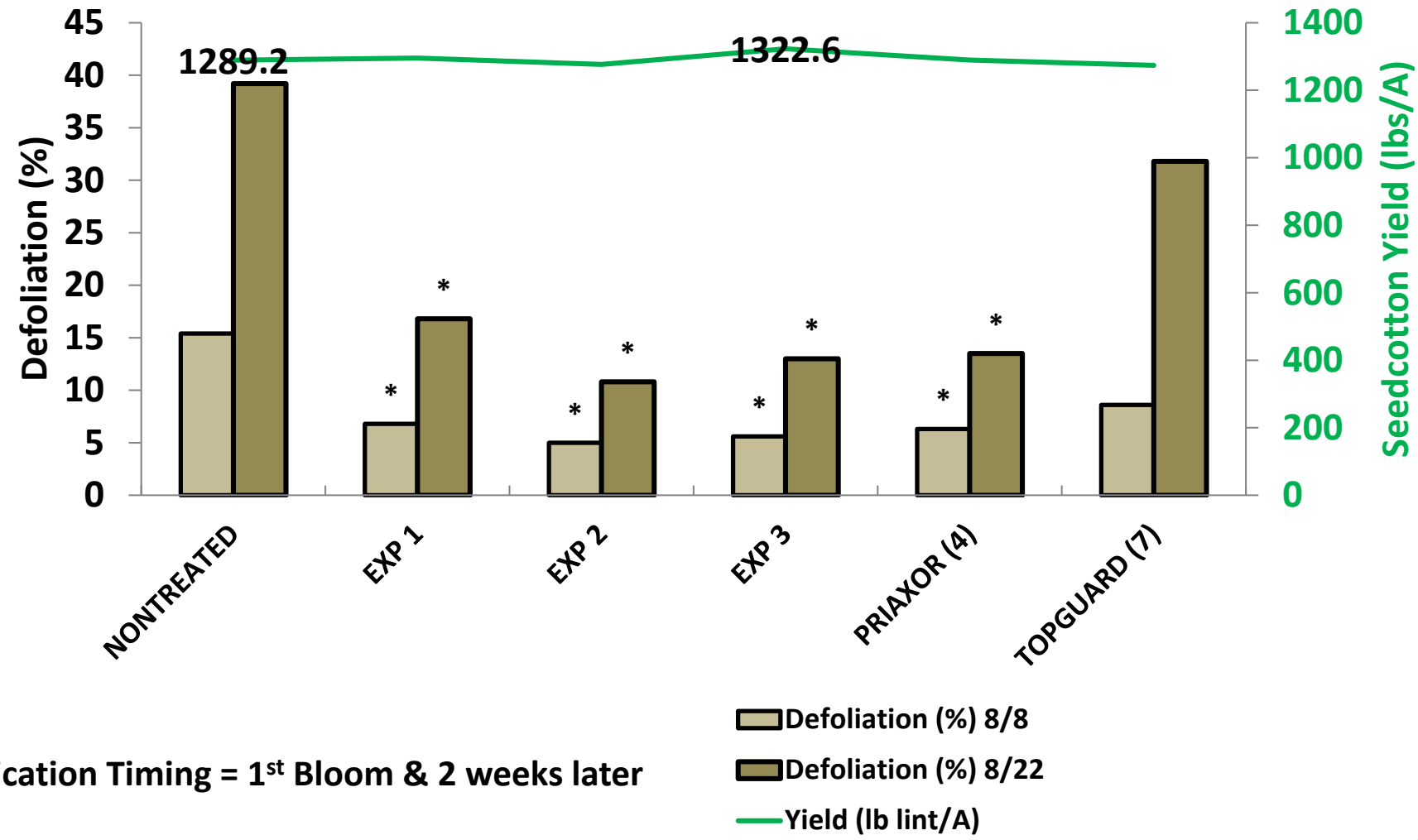



**Application Timing = 1 treatment at disease onset**

PHY499

MRCT1711

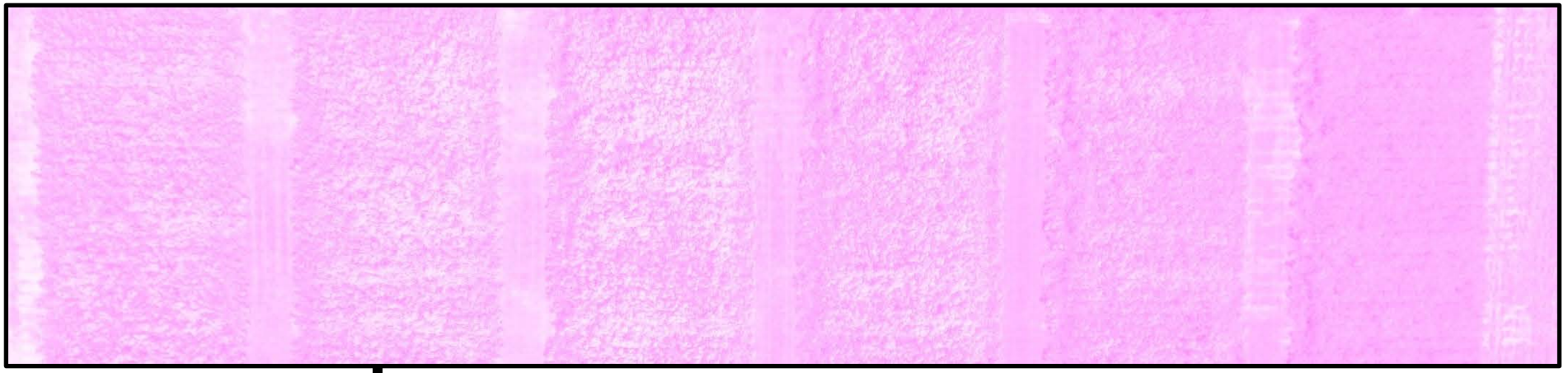
# Experimental and Commercial Programs for Target Spot – Winnsboro, LA – 2017

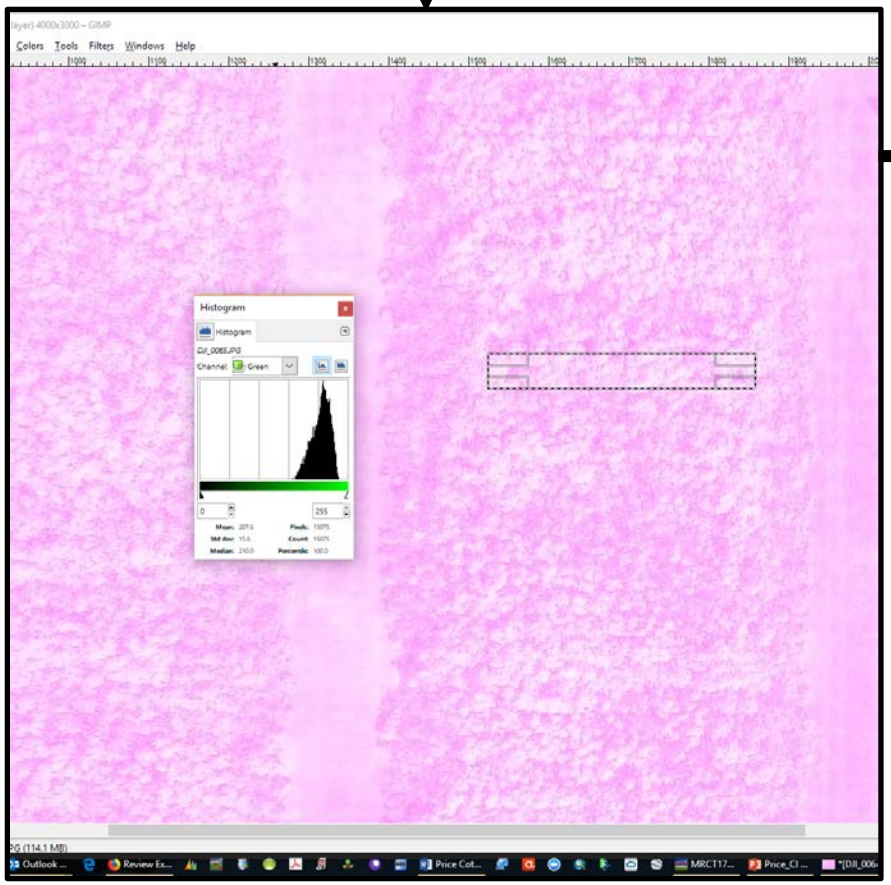



Application Timing = 1st Bloom & 2 weeks later

PHY499

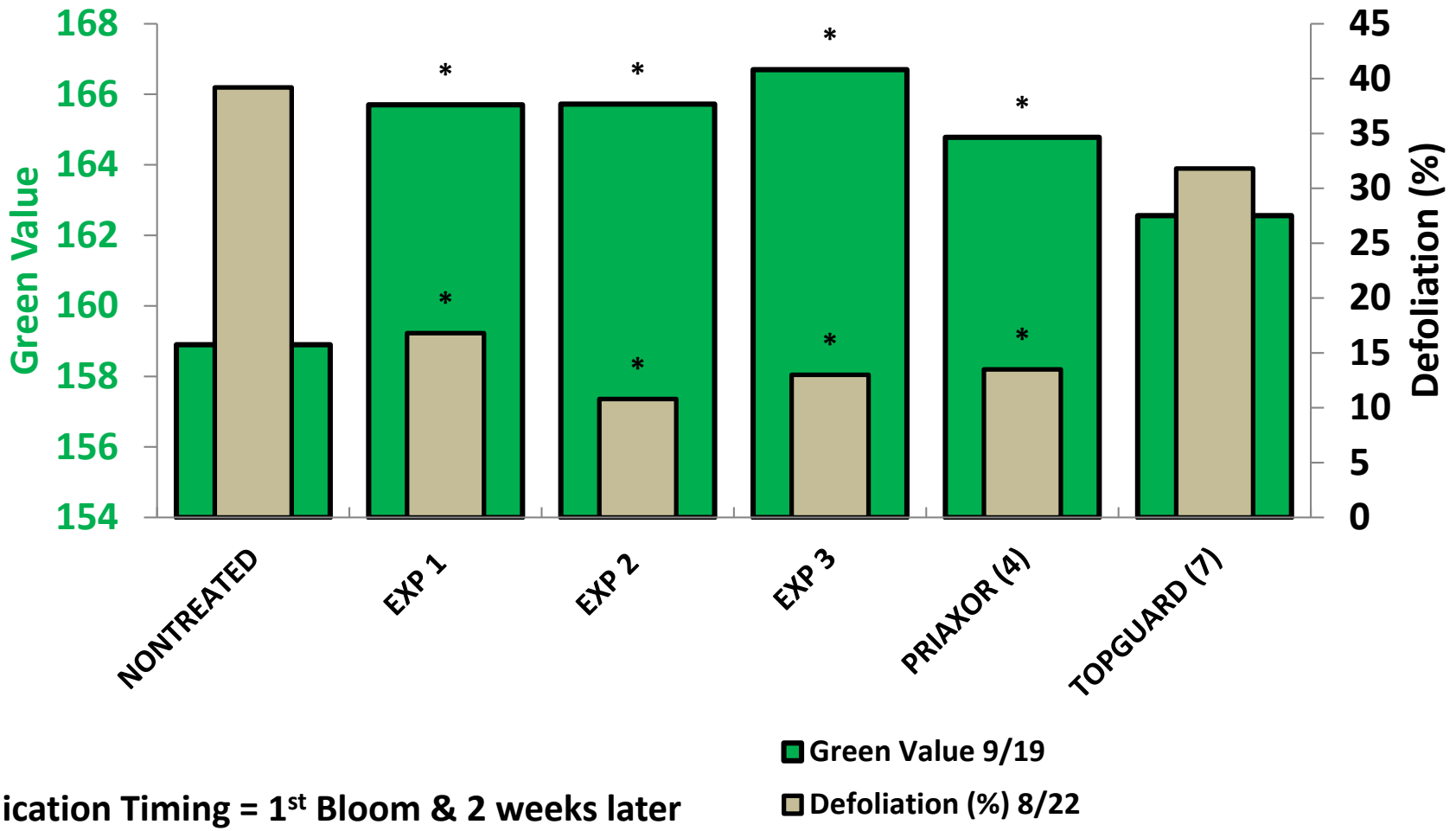
MRCT1711






| Plot | Green Value |
|---|---|
| 101 | 173.1 |
| 102 | 166.9 |
| 103 | 166.2 |
| 104 | 168.2 |
| 105 | 166.1 |
| 106 | 163.9 |
| … | … |

# BASF Programs for Target Spot
# Winnsboro, LA – 2017




**Application Timing = 1st Bloom & 2 weeks later**

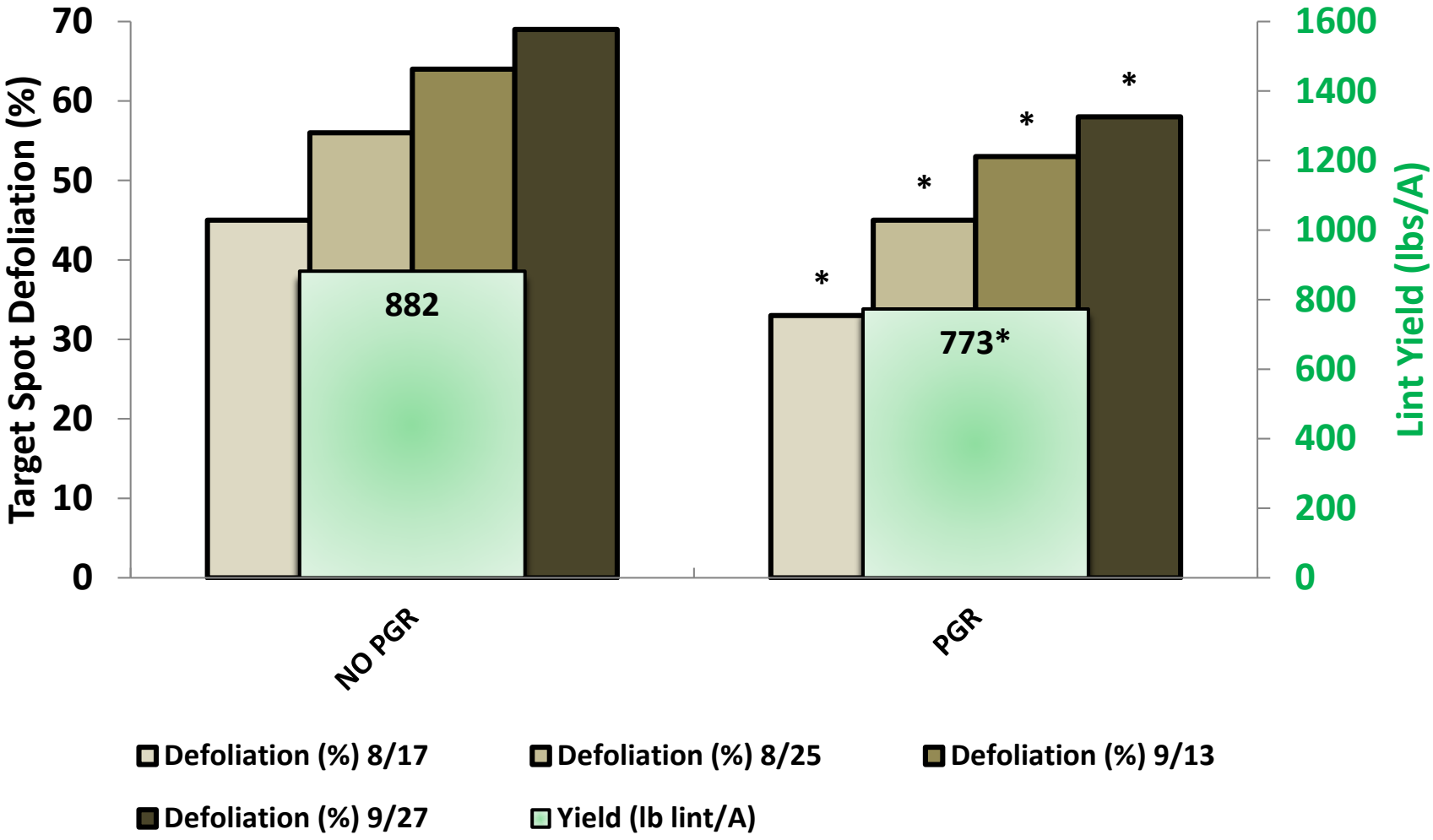
**PHY499**

**MRCT1711**

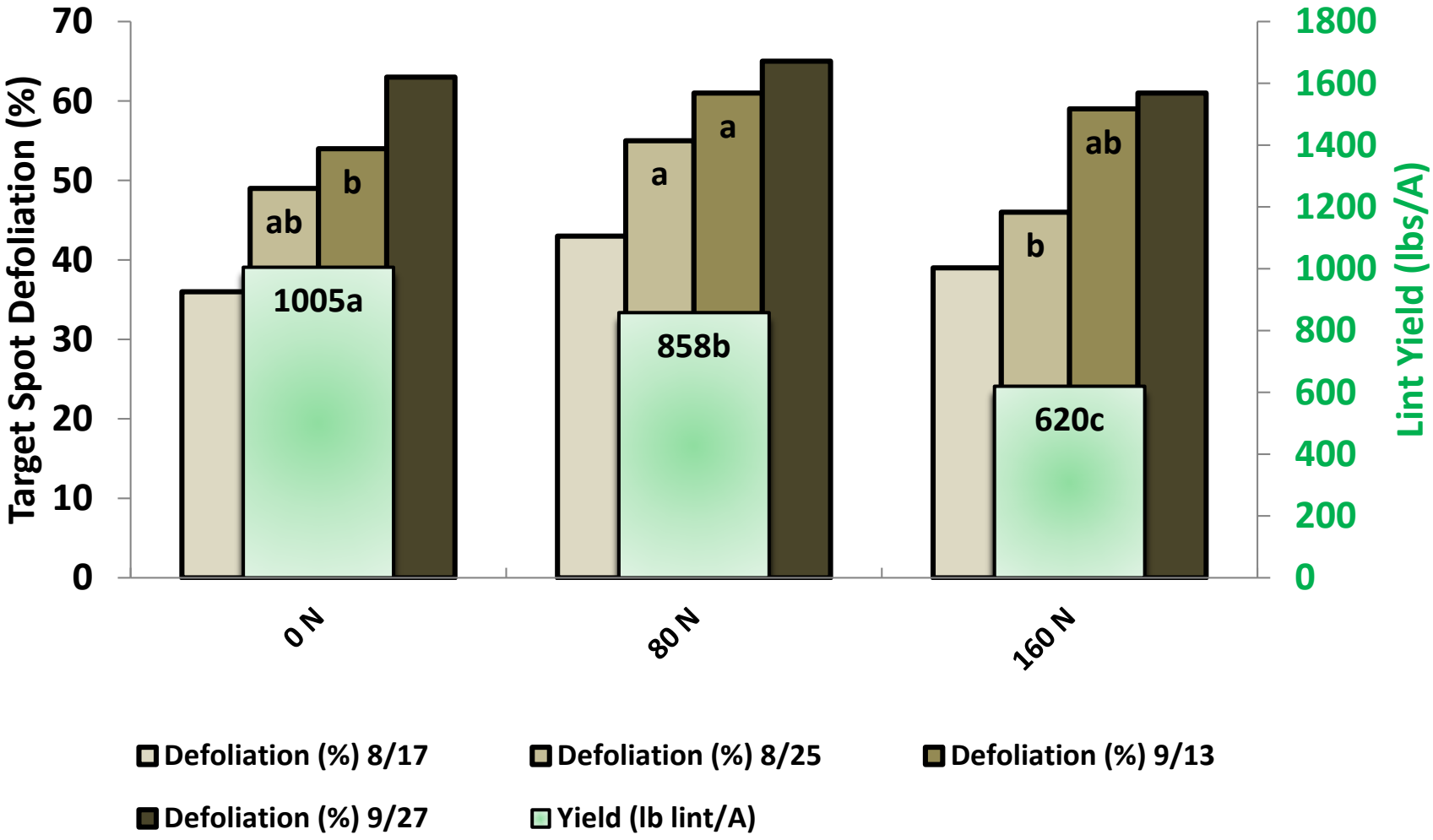
# PGR x N x Fungicide Trials

- Collaboration with Dr. Fromme & Dr. Padgett
- RCBD, Factorial arrangement
- No PGR or PGR
- 0, 80, or 160 N
- No fungicide or Priaxor (4 oz at 1$^{st}$ & 3$^{rd}$ week of bloom)

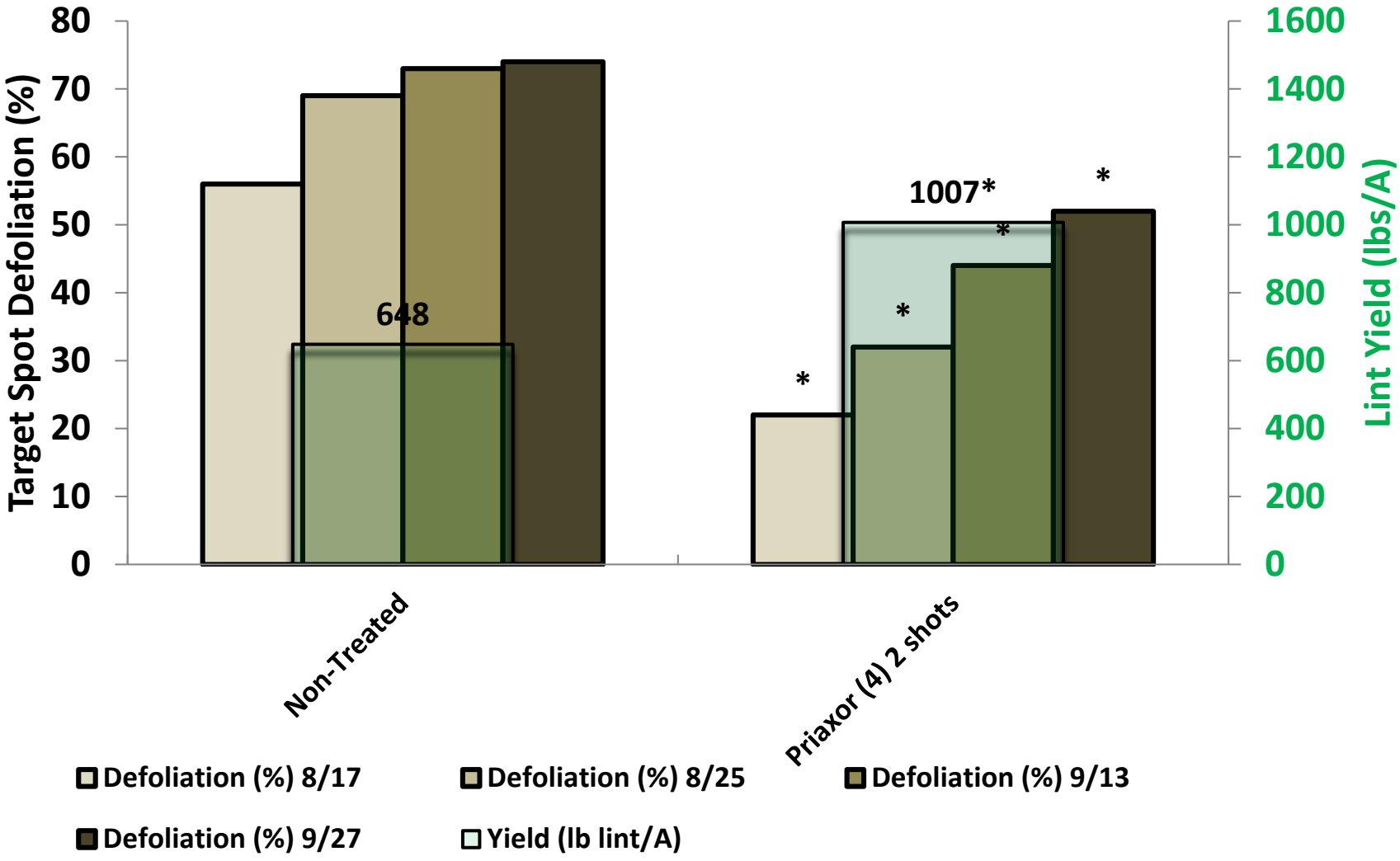
# PGR x N x PXR – Alexandria, LA – 2017
## Effect of PGR on Defoliation and Yield



# PGR x N x PXR – Alexandria, LA – 2017
# Effect of N rate on Defoliation and Yield



# PGR x N x PXR – Alexandria, LA – 2017
# Effect of Fungicide on Defoliation and Yield



# 2017 Variety Trials – Winnsboro & Alexandria

# Plant Disease Management Reports (www.apsnet.org)

| Variety (MRRS) | % Defol (mean) |
|---|---|
| PHY330W3FE | 45 |
| ST4946GLB2 | 42.5 |
| PHY490W3FE | 40 |
| PX3A99W3FE | 38.75 |
| PHY450W3FE | 37.5 |
| PX4A57W3FE | 37.5 |
| ST5020GLT | 37.5 |
| PHY340W3FE | 36.25 |
| 16R338B3XF | 33.75 |
| FM1953GLTP | 32.5 |
| 16R341B3XF | 31.25 |
| 16R346B3XF | 30 |
| NG5007B2XF | 30 |
| ST4949GLT | 30 |
| PHY312WRF | 28.75 |
| PHY444WRF | 28.75 |
| PX3A96W3FE | 28.75 |
| PX4A62W3FE | 28.75 |
| UA222 | 27.5 |
| AMX1714B2XF | 27.5 |
| DP1555B2XF | 27.5 |
| CPS16214B2XF | 26.25 |
| DG3526B2XF | 26.25 |
| DP1518B2XF | 26.25 |
| PHY300W3FE | 26.25 |
| ST4848GLT | 26.25 |
| AMX1710B2XF | 25 |
| PX5B76W3FE | 25 |
| ST6182GLT | 25 |
| CPS1725INR-B2XF | 23.75 |
| NG3522B2XF | 23.75 |
| PX5B73W3FE | 23.75 |
| DP1522B2XF | 23.75 |
| PX2A28W3FE | 22.5 |
| PX4A54W3FE | 22.5 |
| CPS1702GLT | 22.5 |
| NG4601B2XF | 22.5 |
| PX3A82W3FE | 22.5 |
| PX5A57W3FE | 21.25 |
| 5517GLTP | 18.75 |
| DP1646B2XF | 18.75 |
| PX4A52W3FE | 18.75 |
| CPS17330B3XF | 17.5 |
| 17XC8 | 16.25 |
| DG3605B2XF | 15 |
| ST6448GLB2 | 15 |
| HQ210CT | 12.5 |
| AT585 | 12.5 |
| DG3757B2XF | 11.25 |

| Variety (DLRS) | % Defol (mean) |
|---|---|
| PHY450W3FE | 50 |
| PX3A99W3FE | 50 |
| PX4A57W3FE | 50 |
| ST4946GLB2 | 46.25 |
| PHY312WRF | 45 |
| PX4A52W3FE | 45 |
| ST5020GLT | 45 |
| DG3605B2XF | 42.5 |
| PHY300W3FE | 42.5 |
| ST4949GLT | 42.5 |
| PHY330W3FE | 41.66666667 |
| NG4601B2XF | 41.25 |
| CPS16214B2XF | 40 |
| ST4848GLT | 40 |
| 16R338B3XF | 38.75 |
| PHY340W3FE | 38.75 |
| PHY490W3FE | 38.75 |
| AMX1710B2XF | 37.5 |
| CPS17330B3XF | 37.5 |
| FM1953GLTP | 37.5 |
| PHY444WRF | 37.5 |
| 16R346B3XF | 35 |
| | |
| CPS1725INR-B2XF | 35 |
| PX3A96W3FE | 35 |
| ST6182GLT | 33.33333333 |
| DG3526B2XF | 32.5 |
| PX4A54W3FE | 32.5 |
| AMX1714B2XF | 31.25 |
| CPS1702GLT | 31.25 |
| DP1518B2XF | 31.25 |
| PX5B73W3FE | 31.25 |
| ST6448GLB2 | 31.25 |
| DG3757B2XF | 30 |
| UA222 | 30 |
| NG5007B2XF | 28.75 |
| PX3A82W3FE | 28.75 |
| PX4A62W3FE | 28.75 |
| 17XC8 | 28.33333333 |
| 16R341B3XF | 28.33333333 |
| NG3522B2XF | 26.66666667 |
| 5517GLTP | 25 |
| DP1555B2XF | 25 |
| DP1522B2XF | 23.75 |
| HQ210CT | 21.25 |
| PX5B76W3FE | 20 |
| AT585 | 20 |
| DP1646B2XF | 20 |
| PX2A28W3FE | 20 |
| PX5A57W3FE | 17.5 |

# Target Spot Management

- **Scout!** If disease starts during the 1st month of blooming, and progresses to high defoliation levels, yield loss may occur.
- **Watch the weather.** Frequent rain favors target spot.
- **Watch neighboring soybeans.** Disease is usually spotted in early beans before cotton.
- **Manage excessive canopy growth.** Any rank cotton variety can get target spot. PGRs less effective with high disease pressure.
- **Timely application of fungicides.** Fungicides are effective on target spot. The likelihood of a return on the investment increases with disease pressure.
- **Use maximum total water volume.** High volume and pressure are needed to deliver product low in the canopy. Ideal timing is just prior to canopy closure or at 1st lesion.
- **Don't panic!** If target spot develops late, yield loss due to disease is less likely.
- **Don't seek revenge!** Rescue applications usually will not provide economic returns.

# Thank YOU for Supporting Us!

Boyd Padgett
Brandi Woolam
Brenda Tubana
Charlie Overstreet
Clayton Hollier
Dan Fromme
Daniel Stephenson
Darrell Franks and Crew
Donnie Miller
John Stapp
Josh Copes
Myra Purvis
Paul Washam
Raj Singh
Rick Mascagni
Rogers Leonard
Ronnie Levy
Scott Washam and Crew
Sebe Brown
Steve Harrison
Todd Spivey
Vinson Doyle
Warren Ratcliff and Crew

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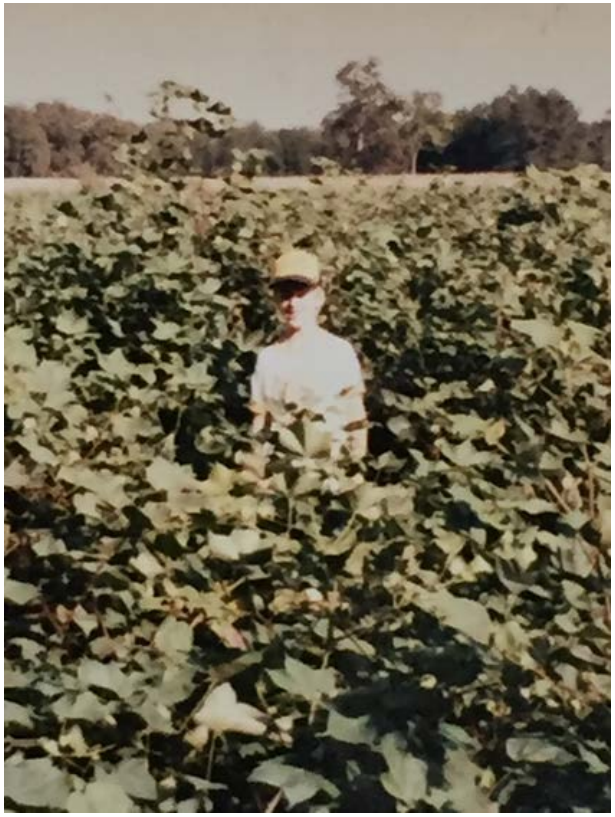

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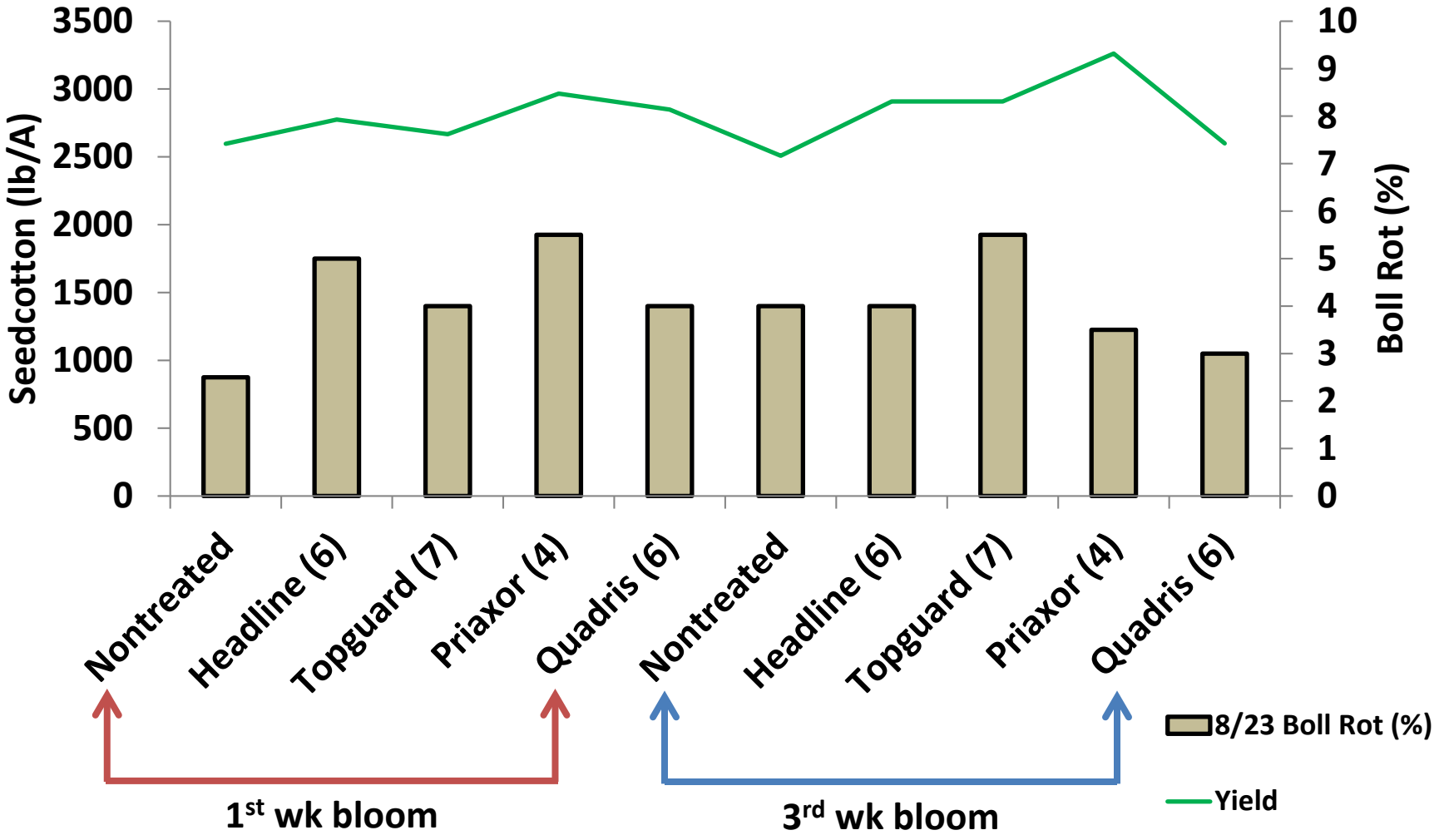
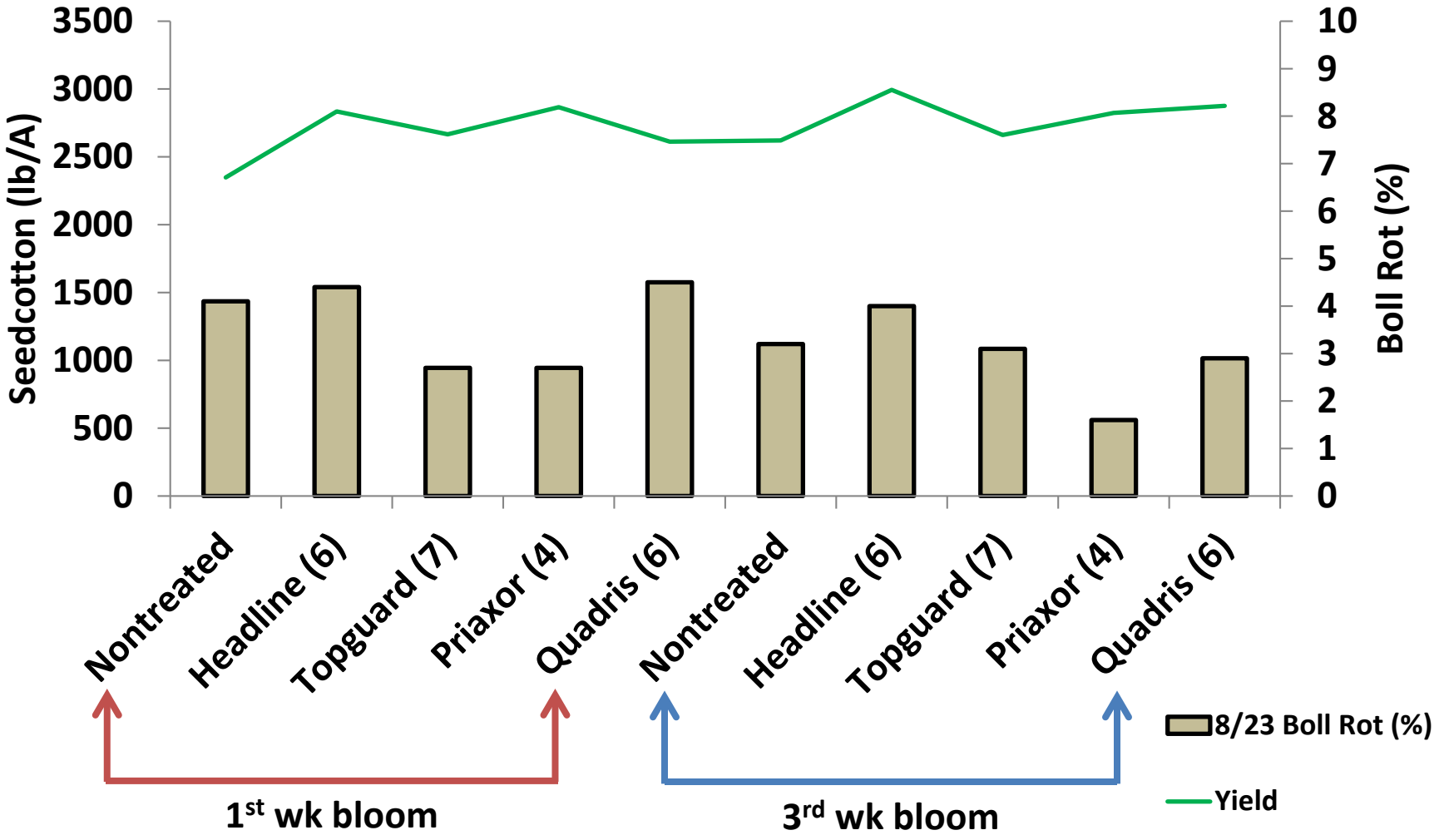
# Regional Fungicide Trial – St. Joseph, LA – 2016 – Boll Rot Ratings




PHY 499
NECT1603

# Regional Fungicide Trial – Winnsboro, LA – 2016 – Boll Rot Ratings




PHY 499
MRCT1607