

# Four Year Evaluation of Fungicides For Management of Cotton Leaf Diseases in Colquitt County



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# Do foliar diseases in cotton cause yield loss?



# 2019 Georgia Plant Disease Loss Estimate -- Cotton

Disease	% Reduction in Crop Value	Damage (\$ Millions)	Cost of Control (\$ Millions)	Total (\$ Millions)
Boll Rot (lint)	2.0	19.7	---	19.7
Nematodes	8.0	78.7	26.5*	105.2
<i>Southern root-knot</i>	7.0	68.8	---	
<i>Reniform</i>	0.5	4.9	---	
<i>Columbia lance</i>	trace	---	---	
<i>Sting</i>	0.5	4.9		
Seedling Disease	0.5	4.9	2.5**	7.4
Fusarium Wilt	0.2	2.0	---	2.0
Ascochyta Blight	Trace	---	---	---
Stemphylium Leaf Spot	2.0	19.7	---	19.7
Target Spot	0.1	1.0	2.3***	3.3
Areolate Mildew (Ramularia leaf spot)	0.1	1.0	---***	1.0
Bacterial Blight	trace	---	---	---
Cotton Leafroll Dwarf	trace	---	---	---
<b>Total</b>	<b>12.9</b>	<b>126.9</b>	<b>31.3</b>	<b>158.2</b>

# Fungicides for Foliar Diseases of Cotton

- **Headline** (pyraclostrobin) (**6 fl oz/A**)
- **Twinline** (pyraclostrobin + metconazole) (**7-8.5 fl oz**)
- **Quadris** (azoxystrobin) (**6 or 9 fl oz/A**)
- **AzoxyStar** (azoxystrobin) (**6 or 9 fl oz/A**)
- **Tebuzol 3.6F** (tebuconazol) (**6-8 fl oz/A**)
  - Labeled for control of southwestern cotton rust
  - *Puccinia cacabata*
- **PROLINE** (prothioconazole) (**5.0-5.7 fl oz/A**)
- **PRIAXOR** (**4.0-6.0 fl oz/A**)
- **MIRAVIS TOP** (**13.6 fl oz**)
- **Elatus**
- **TOPGUARD** (flutriafol)



AzoxyStar



# Materials and Methods

- Treatments – Sprayer width (18 or 36 rows wide)
- Replicated 3 to 4 times.
- Fungicide applications targeted for 3 week of bloom.
- Defoliation ratings were taken during each year.
- Plots harvested with producer picker.
- DPL 1646 (2018-2019) DPL 2055 (2020)  
DG 3615 (2021)

# The Treatments

Fungicide	Active Ingredient	Rate oz/A
Untreated		
Abound	Azoxystrobin	6 oz
Priaxor	Pyraclostrobin + fluxapyroxad	4 oz (2018-2019) 6 oz (2020-2021)
Miravis Top	Difenoconazole + pydiflumetofen	13.7 oz

# 2018 Colquitt County Cotton Fungicide Plot

## Bay, Georgia

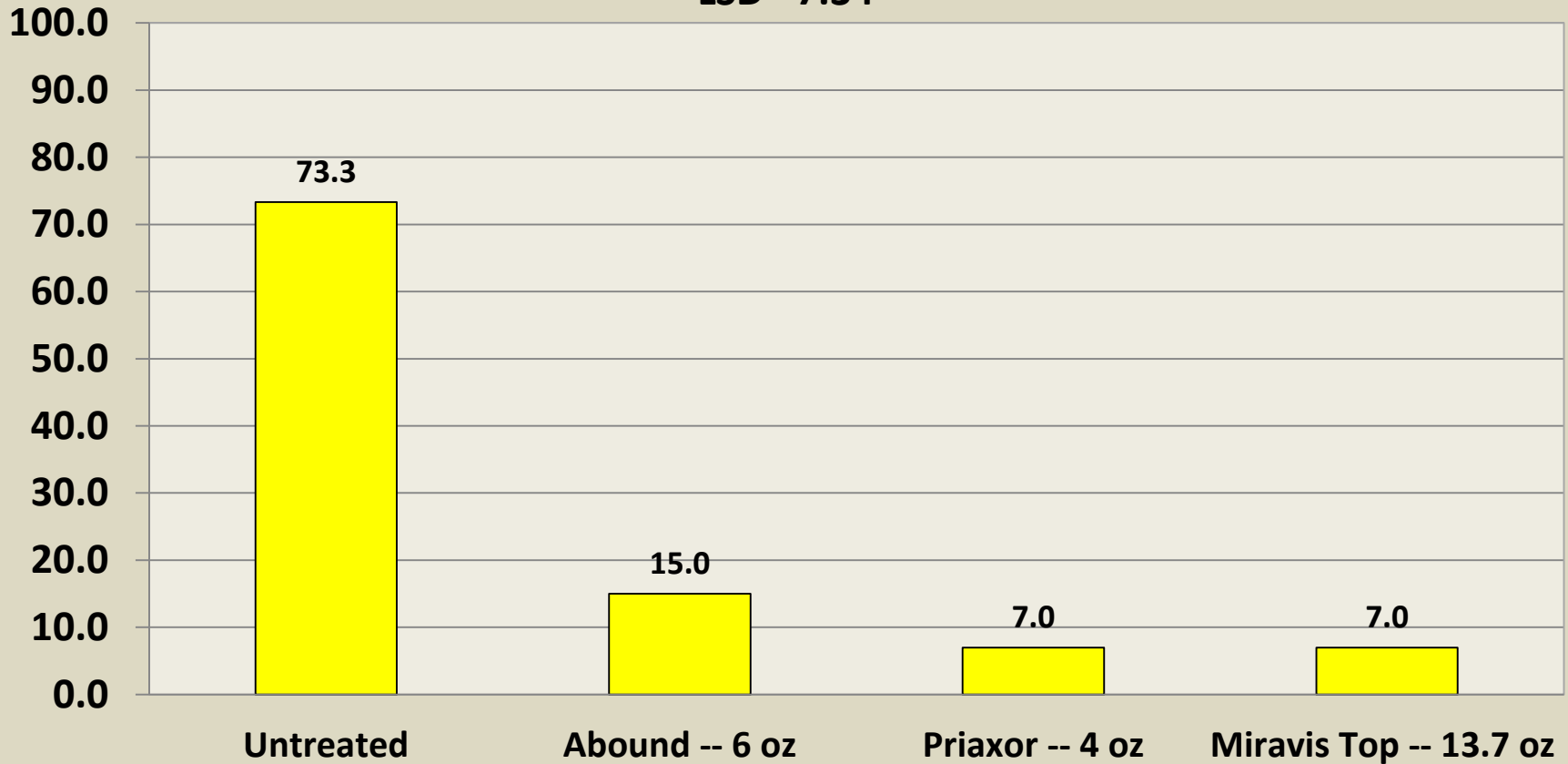
### Lint Yield (Lbs/A)



Fungicide Application 3 week of Bloom. DPL 1646

# 2019 Colquitt County Cotton Fungicide Plot Bay, Georgia % Canopy Defoliation

LSD= 7.34



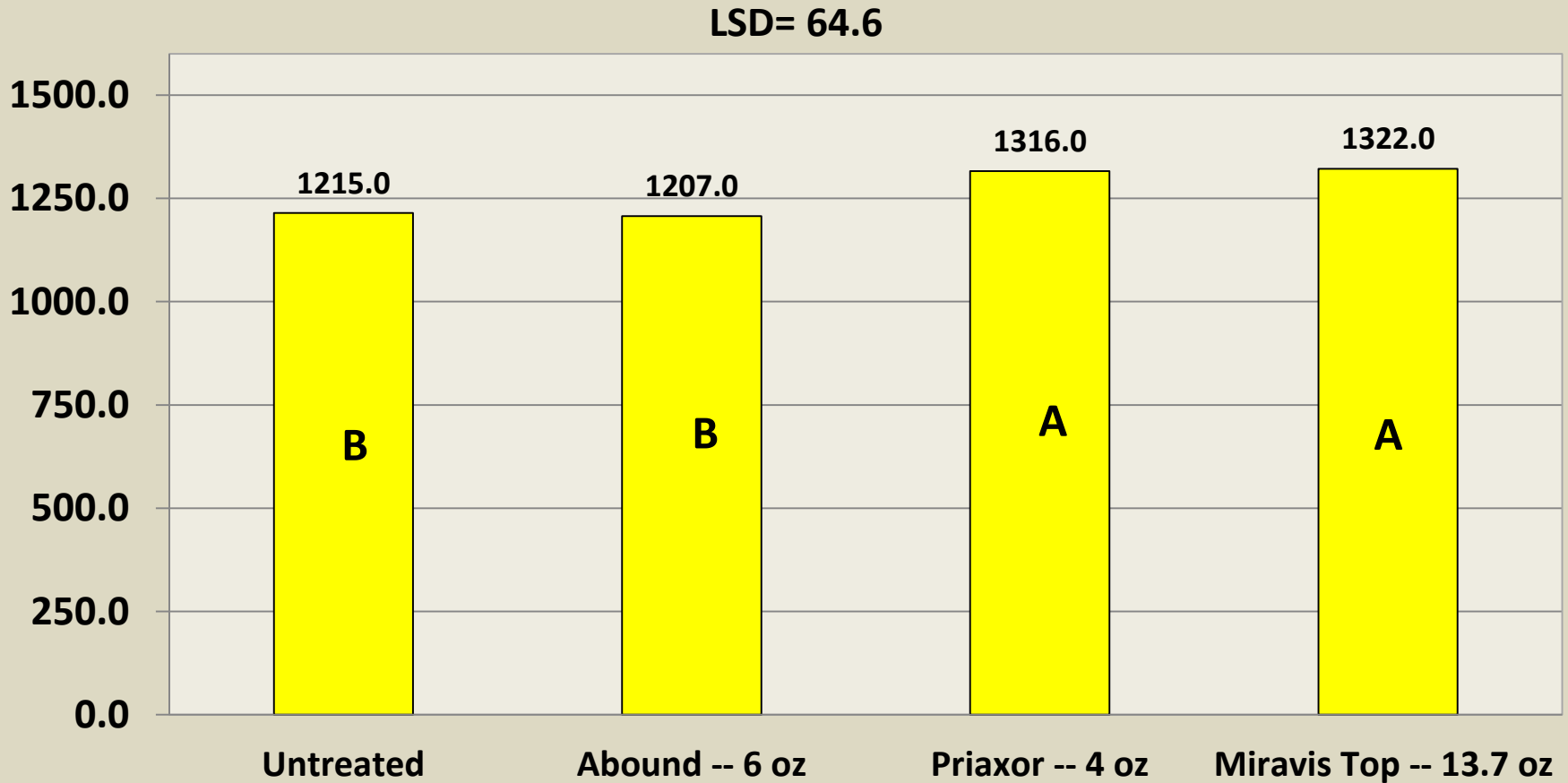
Fungicide Application 3 week of Bloom. Defoliation Ratings 50 % Open Boll DPL 1646



# 2019 Colquitt County Cotton Fungicide Plot

## Bay, Georgia

### Lint Yield (Lbs/A)



Fungicide Application 3 week of Bloom. DPL 1646

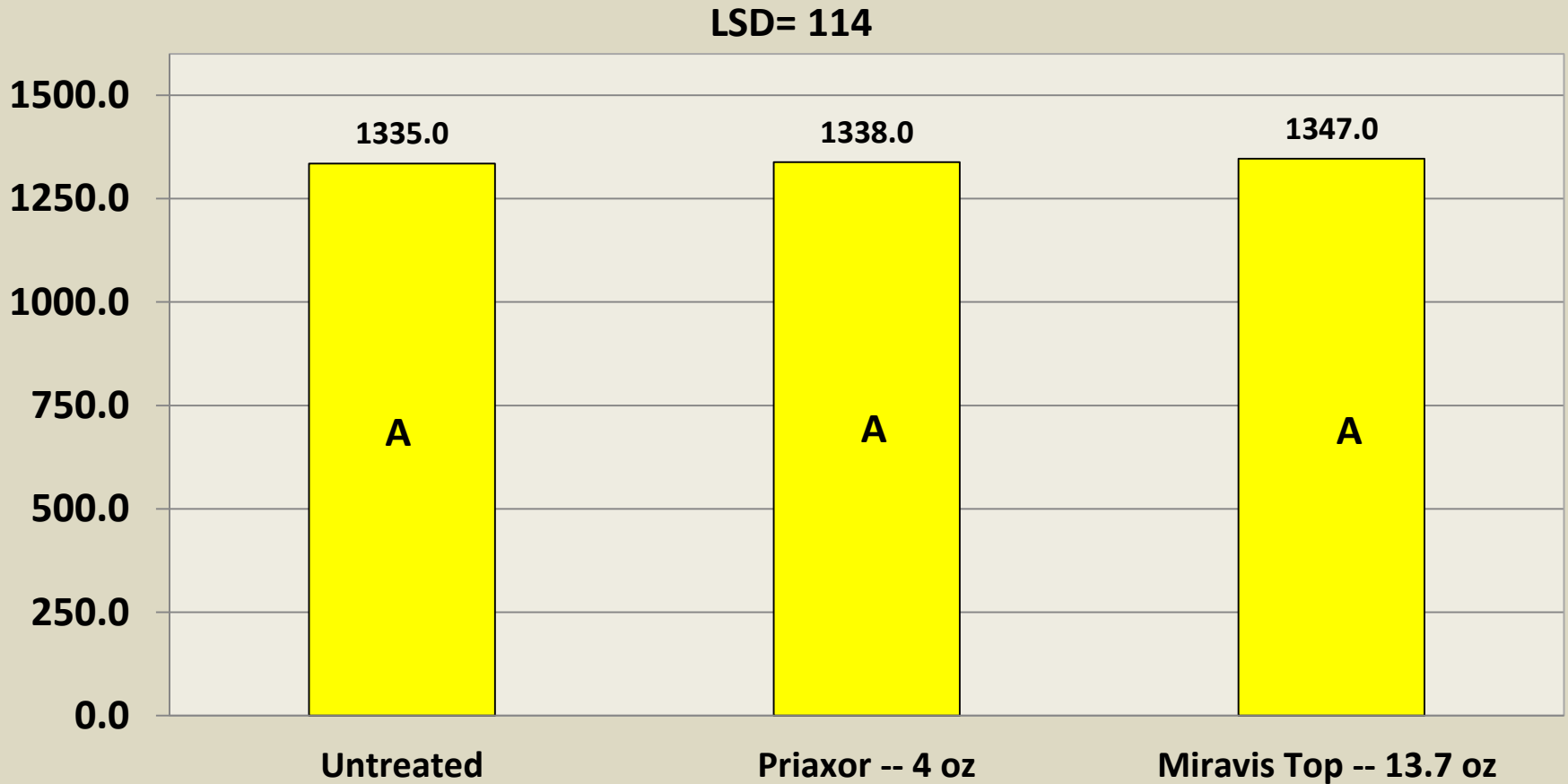
# 2019 Colquitt County Cotton Fungicide Plot Doerun, Georgia % Canopy Defoliation

LSD= 4.95



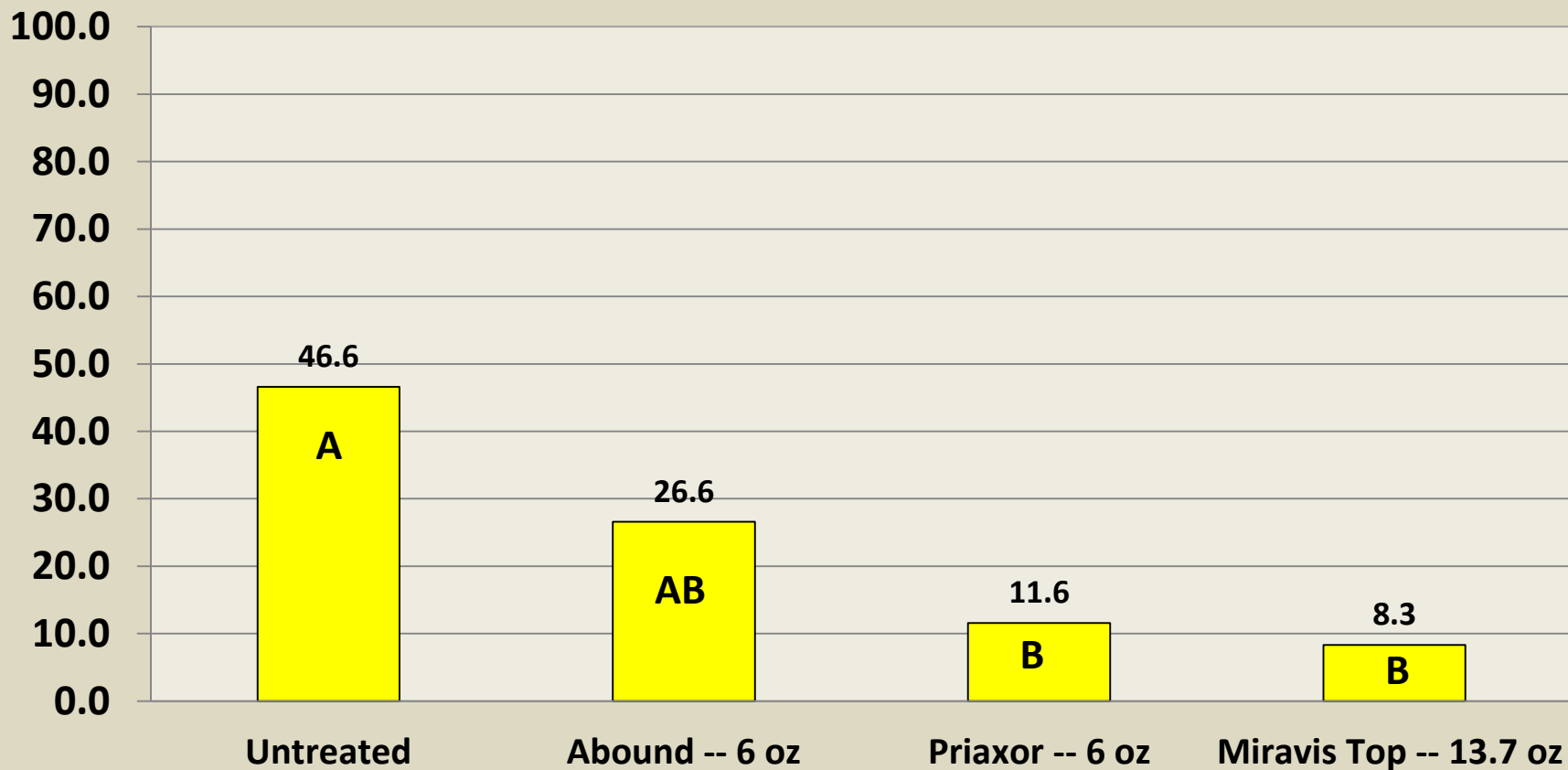
Fungicide Application 3 week of Bloom. Defoliation Ratings 1 Day Before Defoliation

# 2019 Colquitt County Cotton Fungicide Plot Doerun, Georgia Lint Yield (Lbs/A)



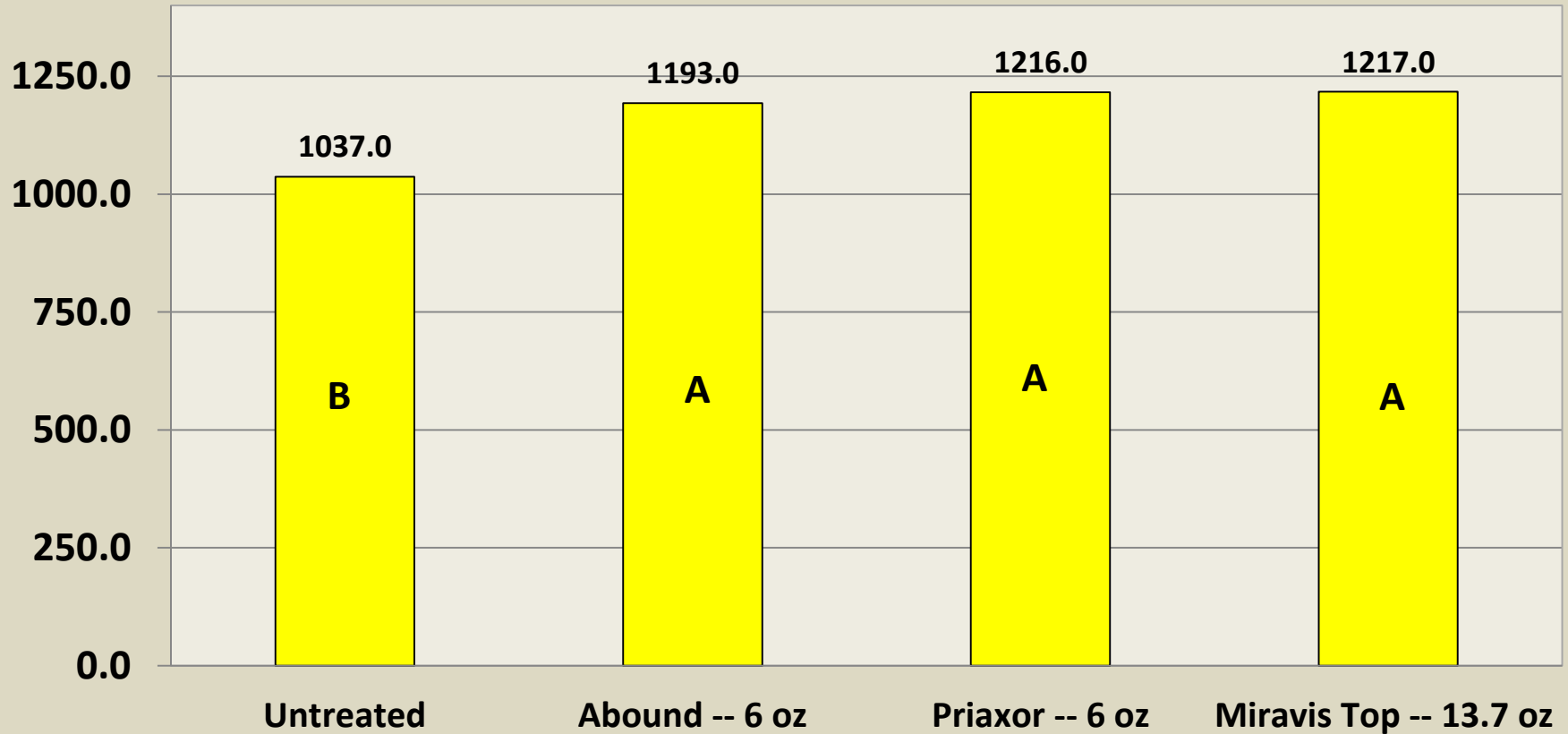
Target Spot of primary disease. Fungicide Application 3 week of Bloom. DPL 1646

# 2020 Colquitt County Cotton Fungicide Plot Bay, Georgia Percent Defoliation



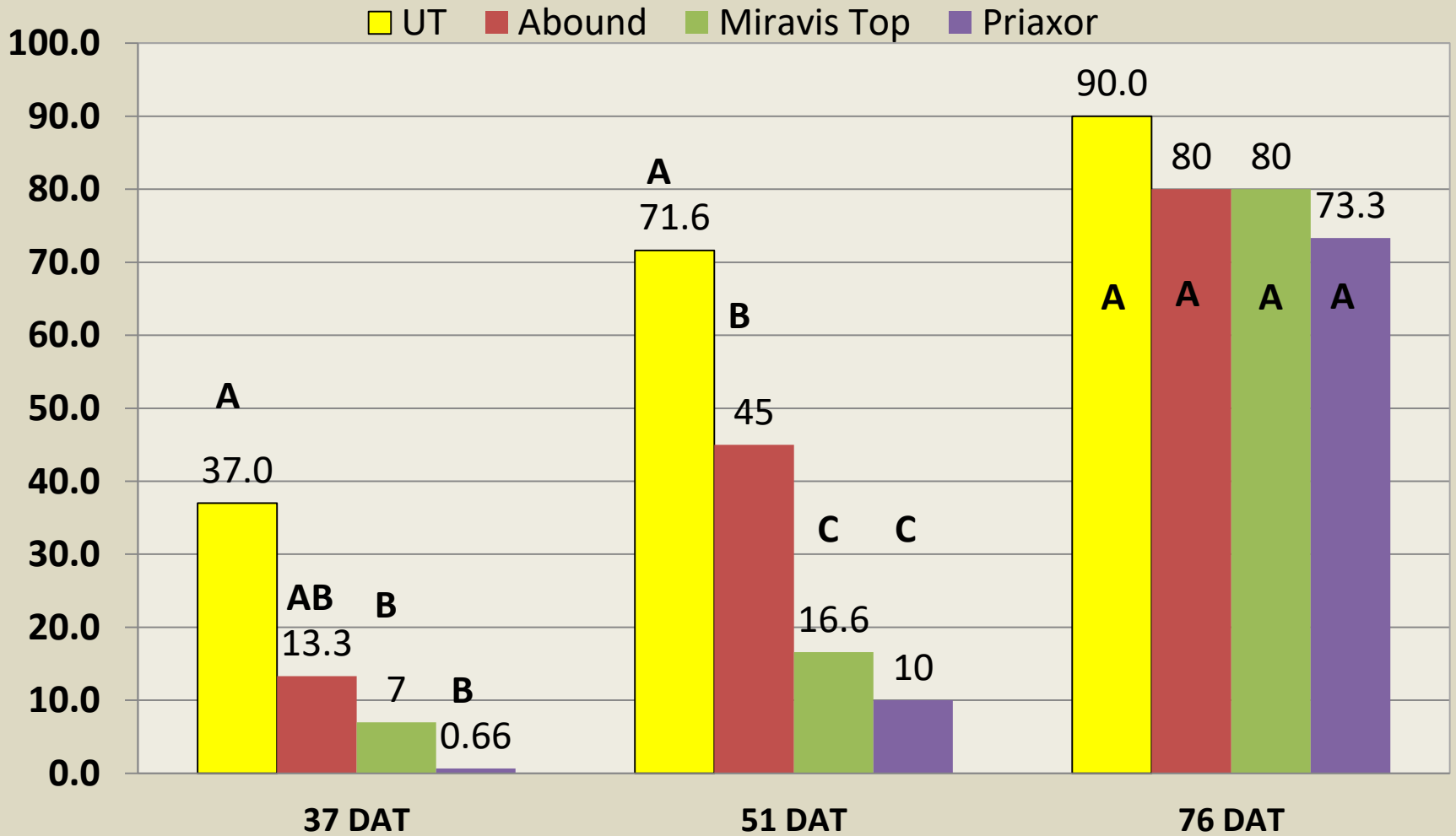
Defoliation Ratings at 60-70% open boll DPL 2055

# 2020 Colquitt County Cotton Fungicide Plot Bay, Georgia Lint Yield (Lbs/A)



Fungicide Application 3 week of Bloom. DPL 2055

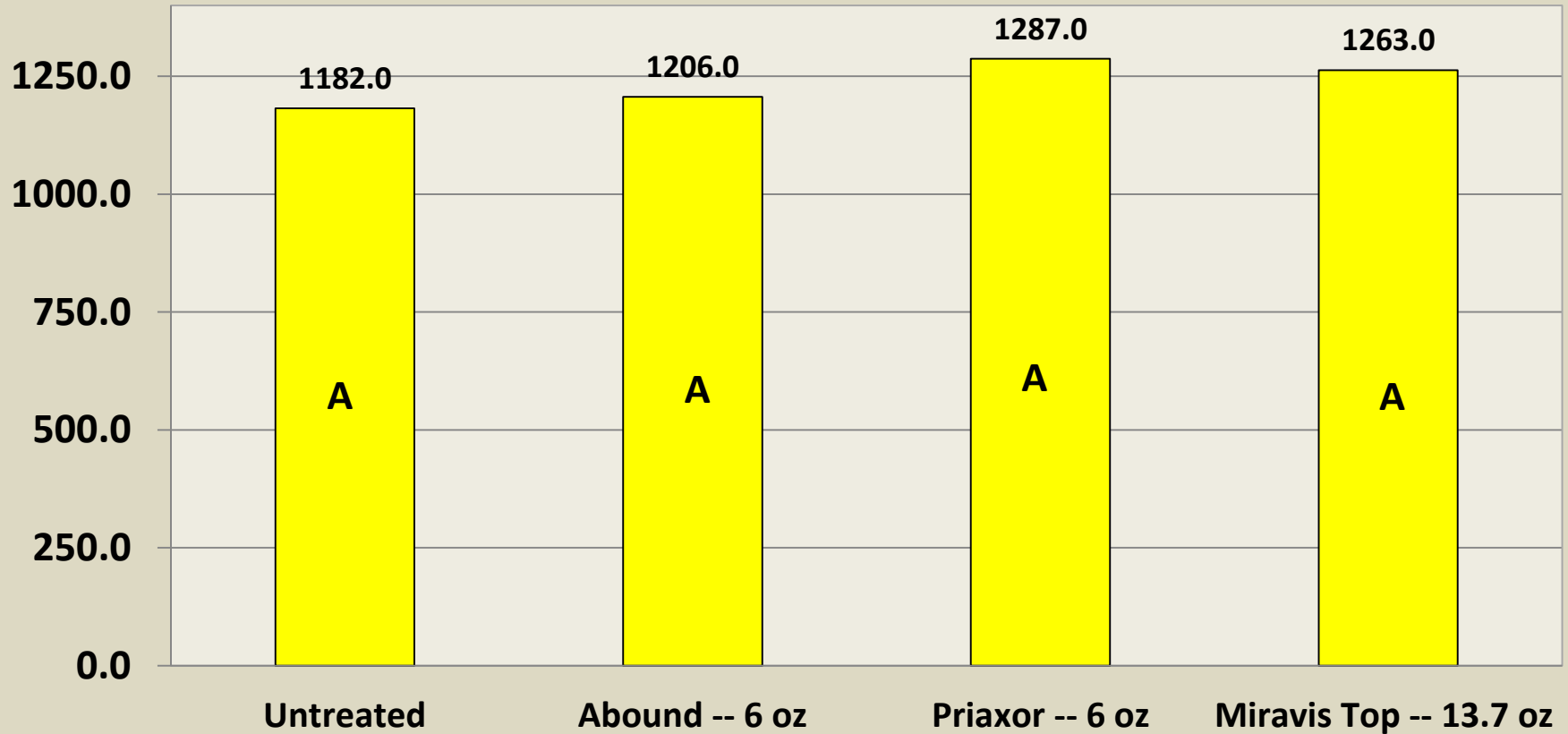
# 2021 Colquitt County Cotton Fungicide Plot Bay, Georgia Percent Defoliation



# 2021 Colquitt County Cotton Fungicide Plot

## Bay, Georgia

### Lint Yield (Lbs/A)



Fungicide Application 3 week of Bloom. DG 3615

# Conclusions With Areolate Mildew

- The use of fungicides always reduced defoliation.
- Priaxor and Miravis Top were the best, azoxystrobin better than untreated check.
- In 4 out of 5 trials, yields increased by at least 100 lbs of lint, sometimes more.
- Areolate Mildew is becoming as important or more than Target Spot.



# Acknowledgements

A large field of green crops, likely soybeans, with a combine harvester visible in the distance under a blue sky with scattered clouds.

- Perryman Farms
- Buckner Farms
- Funston Gin
- BASF
- Syngenta

# Any Questions?

