

# 2022 Corn Fungicide Trials

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# 2022 Diseases

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Gray leaf spot (GLS) was the dominant foliar disease of the 2022 growing season.

In field trials, severity was found to be above 10% in some non-treated control plots at R5.





# 2022 Disease

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Other common foliar diseases were Bacterial Leaf Streak, Southern Rust, Northern Corn Leaf Blight.

The arrival and spread of Tar Spot was also discovered in some field trials in eastern Nebraska.

These diseases were found at low severities throughout the trials and data was not reported.





# 2022 Environmental Conditions

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This year much of Nebraska experienced a harsh drought. Temperatures for the 2022 growing season were near normal compared to previous years.

On June 7<sup>th</sup>, the South Central Agricultural Laboratory experienced a hail event. Corn was staged at V5-6. Estimated losses due to this hail event were little.

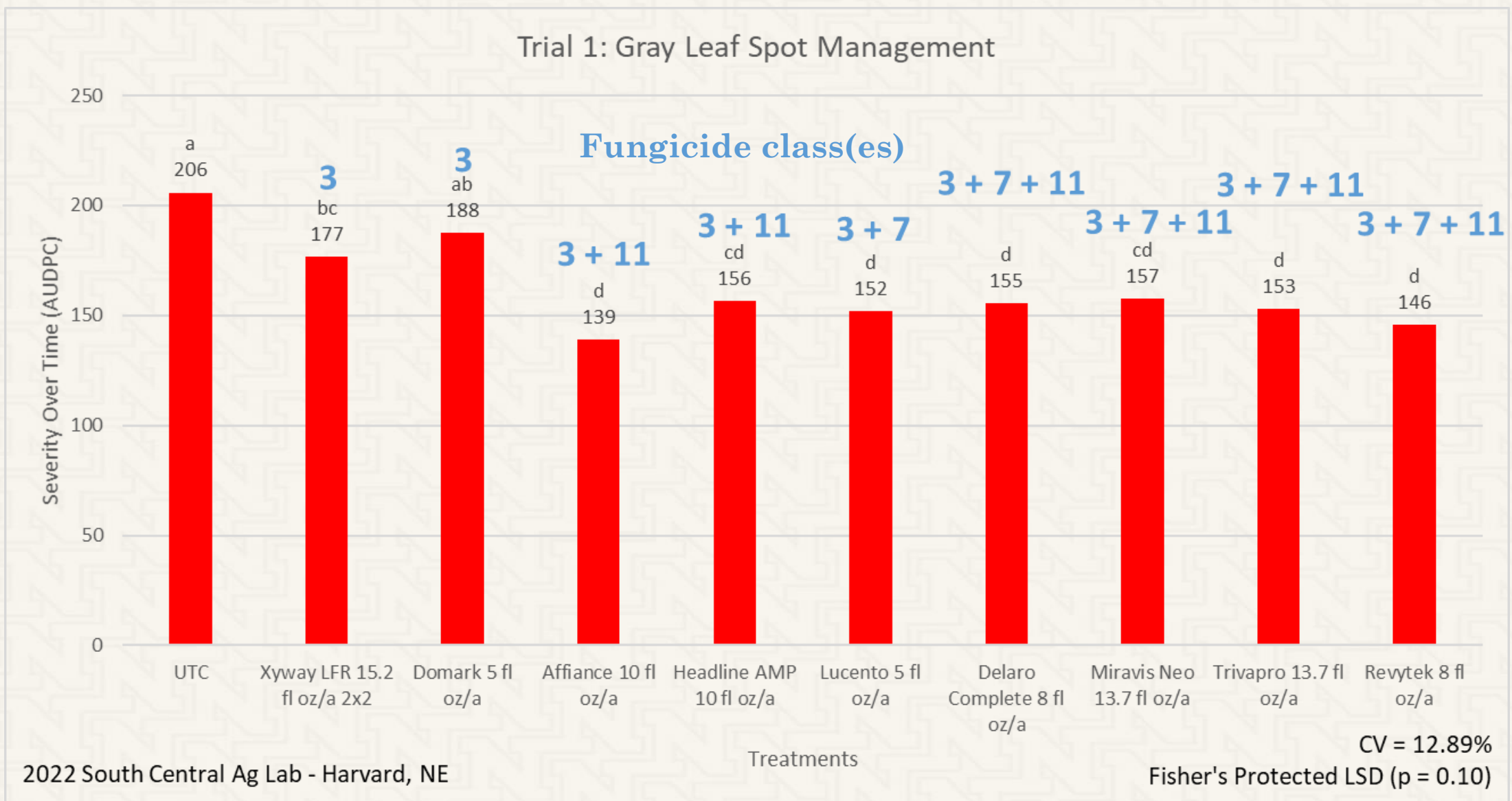




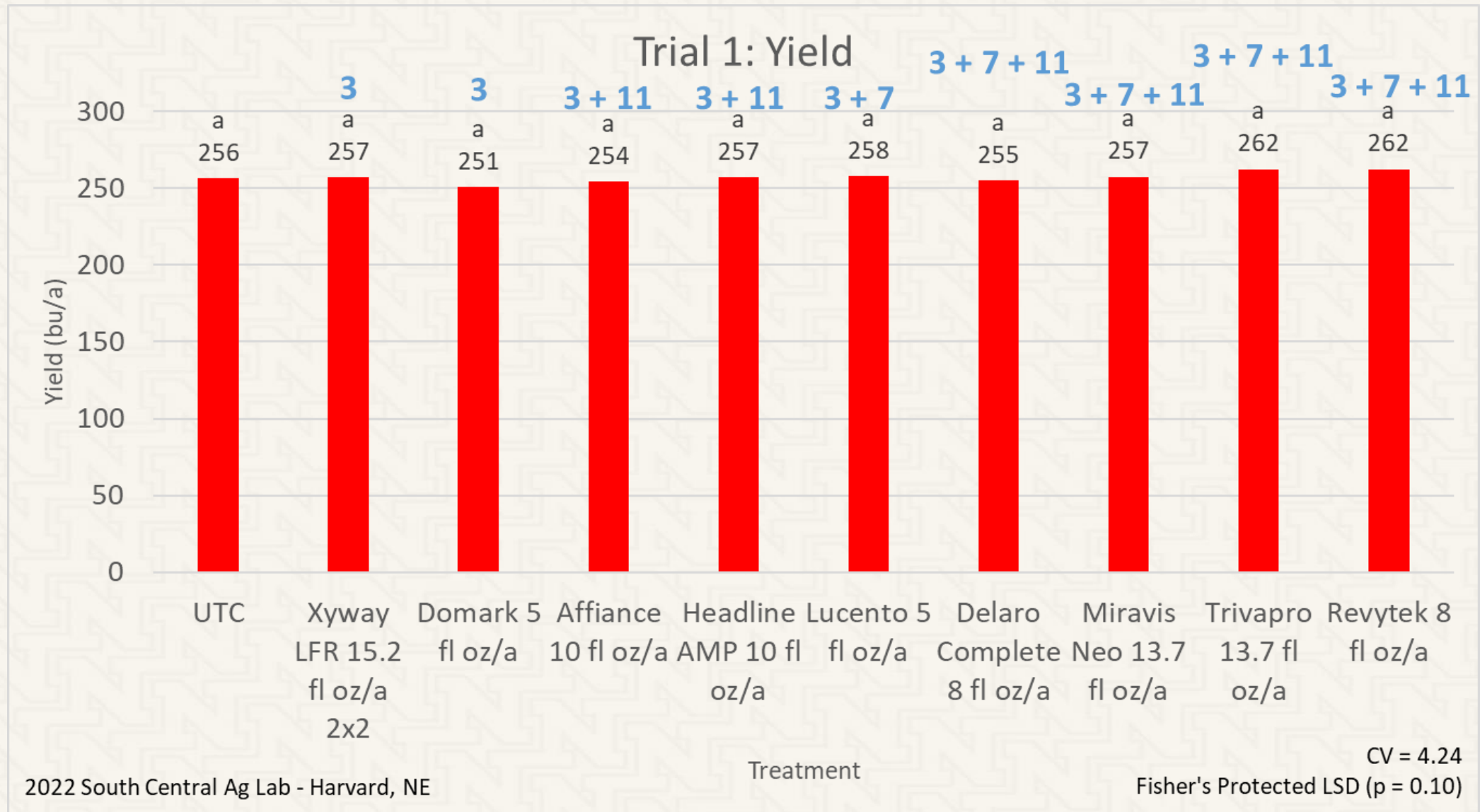
# 2022 Fungicide Comparison – Trial 1

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- South Central Ag Lab (Harvard, NE)
  - Planted – April 26
  - Fungicide Application – At planting and July 21 (R1)
  - Evaluated – Aug 9 (R2), Aug 22 (R4), Sep 17 (R5)
  - Harvested – Oct 18
  - Hybrid – DKC 60-87
    - \*GLS tolerance: 5 out of 9
  - Plot Size – 400 ft<sup>2</sup> (4 rows x 40')
  - Application Volume – 20 gpa
  - Trial Design – Randomized Complete Block
  - Replications – 6
  - ANOVA was used along with the Fisher's protected LSD with  $P \leq 0.10$  for statistical analysis using ARM
  - Major Disease: Gray Leaf Spot
    - No Tar pot present



Hail at V5/6  
Applications at planting (2x2) and R1  
AUDPC = Disease severity estimated at 9 Aug (R2), 22 Aug (R4), 17 Sep (R5)



Fungicide class(es)

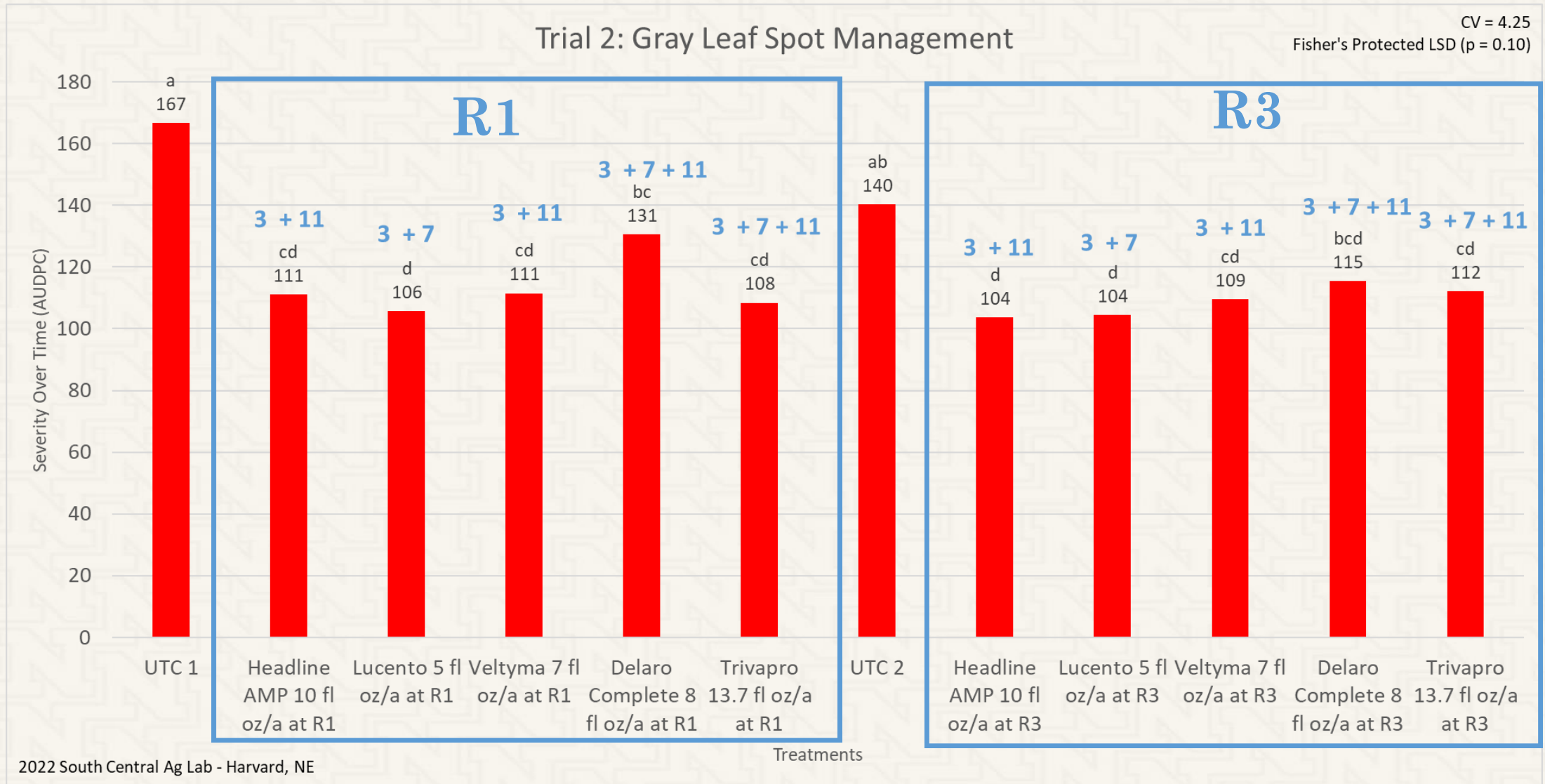
Hail at V5/6  
Harvested – Oct 18  
Yield – moisture adjusted to 15.5%

# Corn Disease Working Group Foliar Trial – Trial 2

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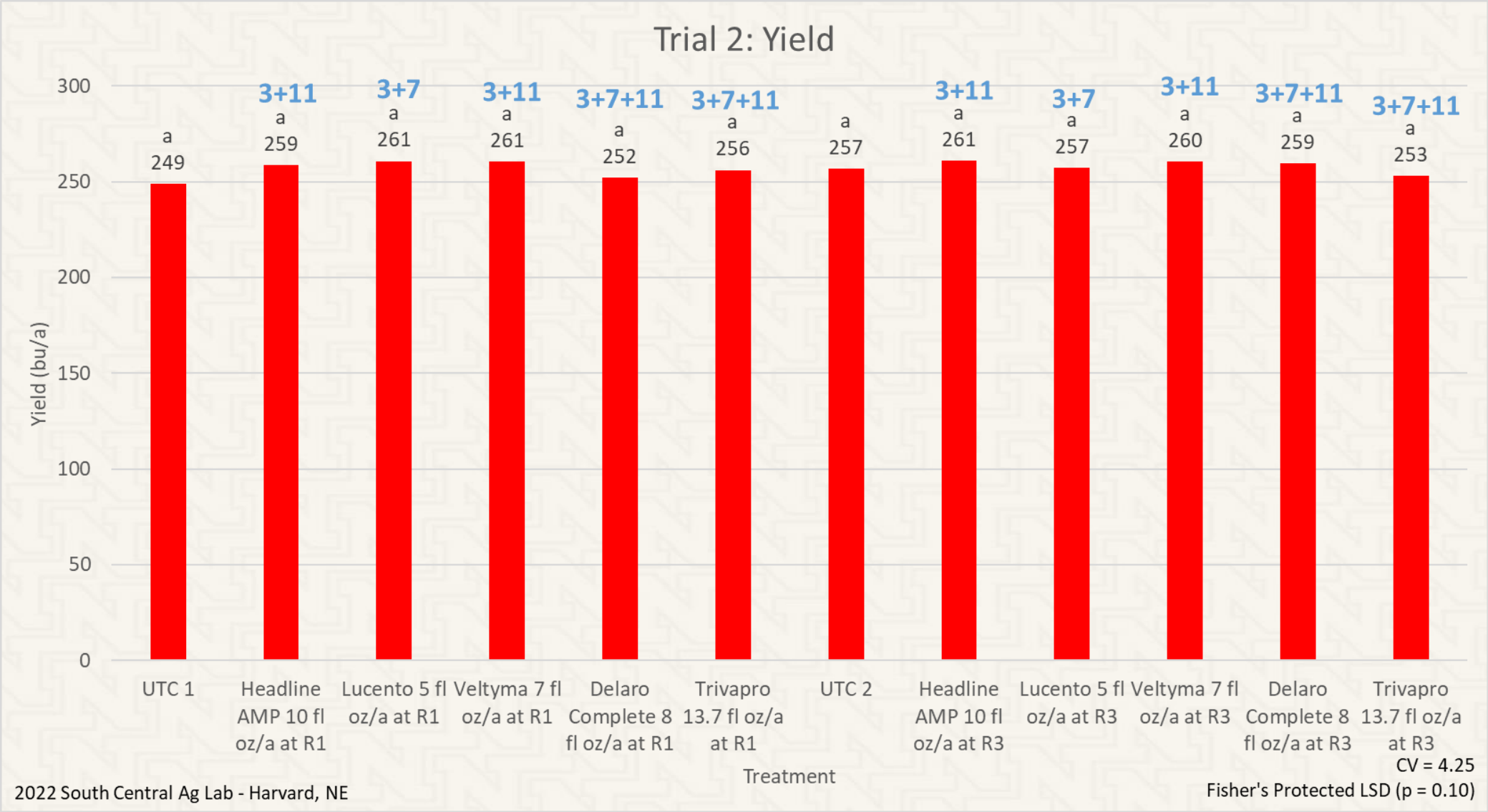
- South Central Ag Lab (Harvard, NE)
  - Planted – May 10
  - Fungicide Application – July 21 (R1) and Aug 9 (R3)
  - Evaluated – Aug 15 (R2), Aug 31 (R4), Sep 15 (R5)
  - Harvested – Oct 19
  - Hybrid – NK1444-3111
    - GLS tolerance: 6 out of 9
  - Plot Size – 400 ft<sup>2</sup> (4 rows x 40')
  - Application Volume – 20 gpa
  - Trial Design – Randomized Complete Block
  - Replications – 6
  - ANOVA was used along with the Fisher's protected LSD with  $P \leq 0.10$  for statistical analysis using ARM
  - Major Disease: Gray Leaf Spot
    - No Tar Spot present





## Fungicide Timing/Classes

Hail at V5/6  
AUDPC = Disease severity estimated at Aug 15 (R2), Aug 31 (R4), Sep 15 (R5)



**Fungicide class(es)**

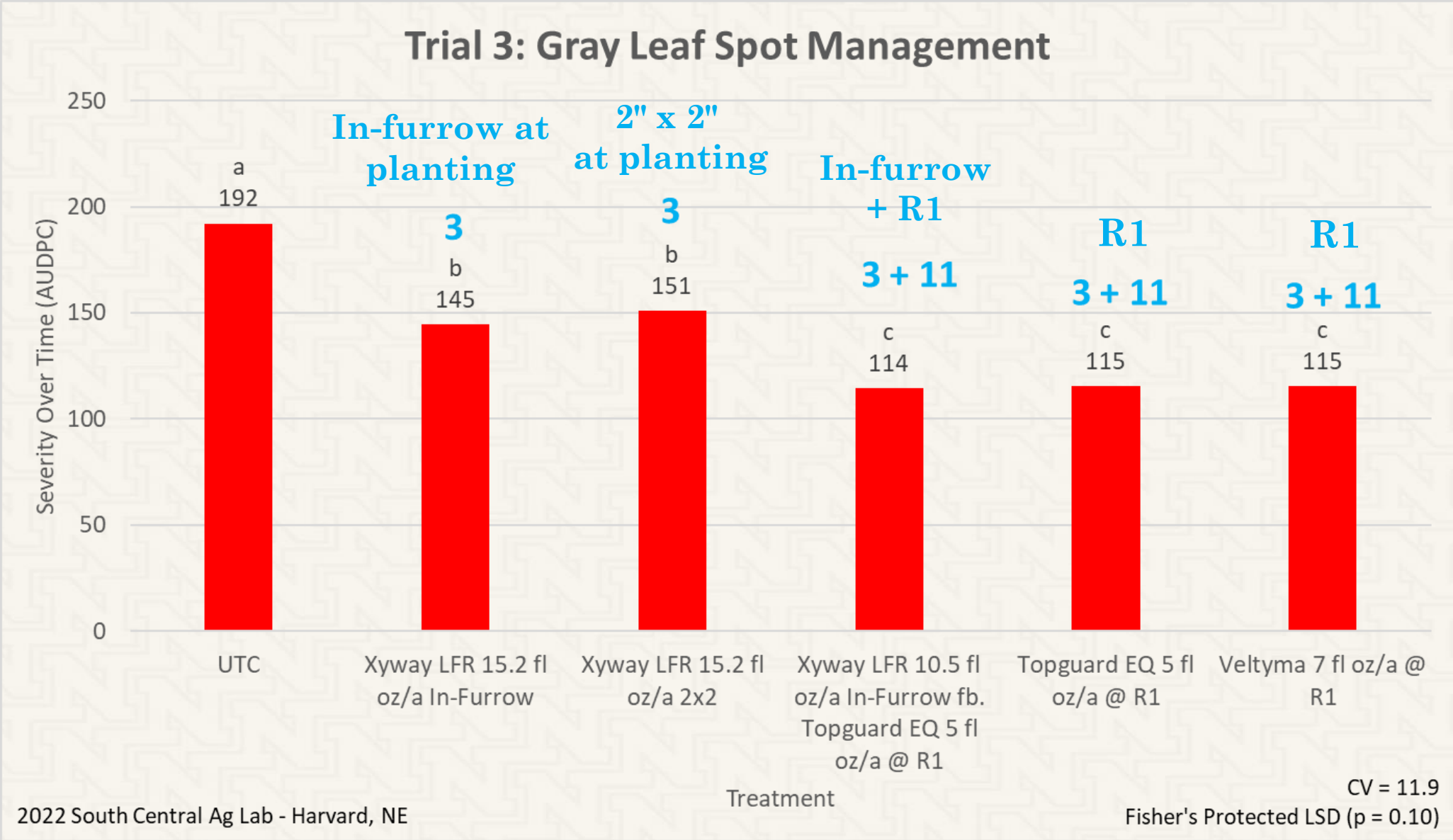
Hail at V5/6  
Harvested – Oct 19  
Yield – moisture adjusted to 15.5%



# Corn Disease Working Group 2x2 Trial – Trial 3

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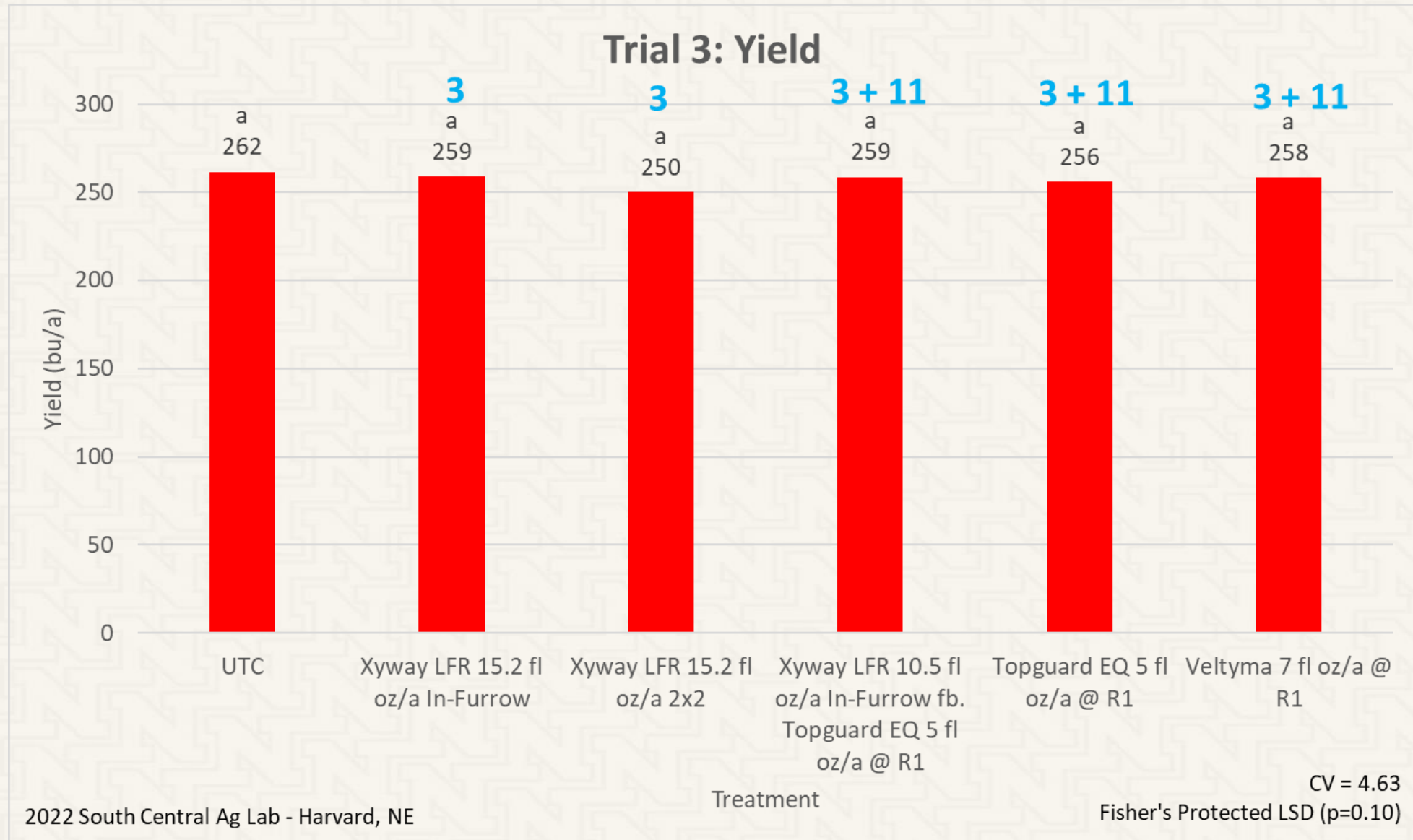
- South Central Ag Lab (Harvard, NE)
  - Planted – 26 April
  - Fungicide Application – 21 July (R1)
  - Evaluated – 11 Aug (R2), 22 Aug (R4), 19 Sep (R5)
  - Harvested – 18 Oct
  - Hybrid – DKC 60-87
    - \*GLS tolerance: 5 out of 9
  - Plot Size – 400 ft<sup>2</sup> (4 rows x 40')
  - Application Volume – 20 gpa
  - Trial Design – Randomized Complete Block
  - Replications – 6
  - ANOVA was used along with the Fisher's protected LSD with  $P \leq 0.10$  for statistical analysis using ARM
  - Major Disease: Gray Leaf Spot
    - No Tar Spot present



Hail at V5/6  
AUDPC = Disease severity estimated at 11 Aug (R2), 22 Aug (R4), 19 Sep (R5)

Fungicide application/class(es)





**Fungicide class(es)**

Hail at V5/6  
Harvested – Oct 18  
Yield – moisture adjusted to 15.5%

# Acknowledgments

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- Chikoti Mukuma, Graduate Student
- Chris Termunde, Graduate Student
- UNL South Central Ag Lab Staff
- Undergraduate workers





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