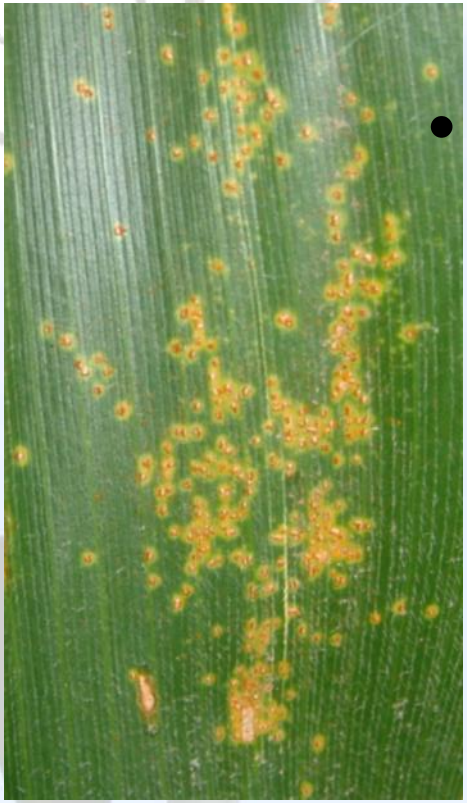
Corn Disease Management and Foliar Fungicide Use (IN FIELD CORN)

Tamra Jackson-Ziems

Department of Plant Pathology

Jim Harbour, Brad Tharnish, Casey Schleicher, Jae Brungardt



Southern Rust

- Favored by warm, damp conditions
- Does not overwinter here
- Orange/tan pustules, mainly on upper leaf surface

Common Rust

- Favored by cool, damp conditions
- Does not overwinter here
- Brick red/brown pustules, on top & bottom leaf surfaces

Gray Leaf Spot

- Favored by warm, wet/humid conditions
- Overwinters in infested crop debris
- Rectangular gray lesions begin on lower leaves

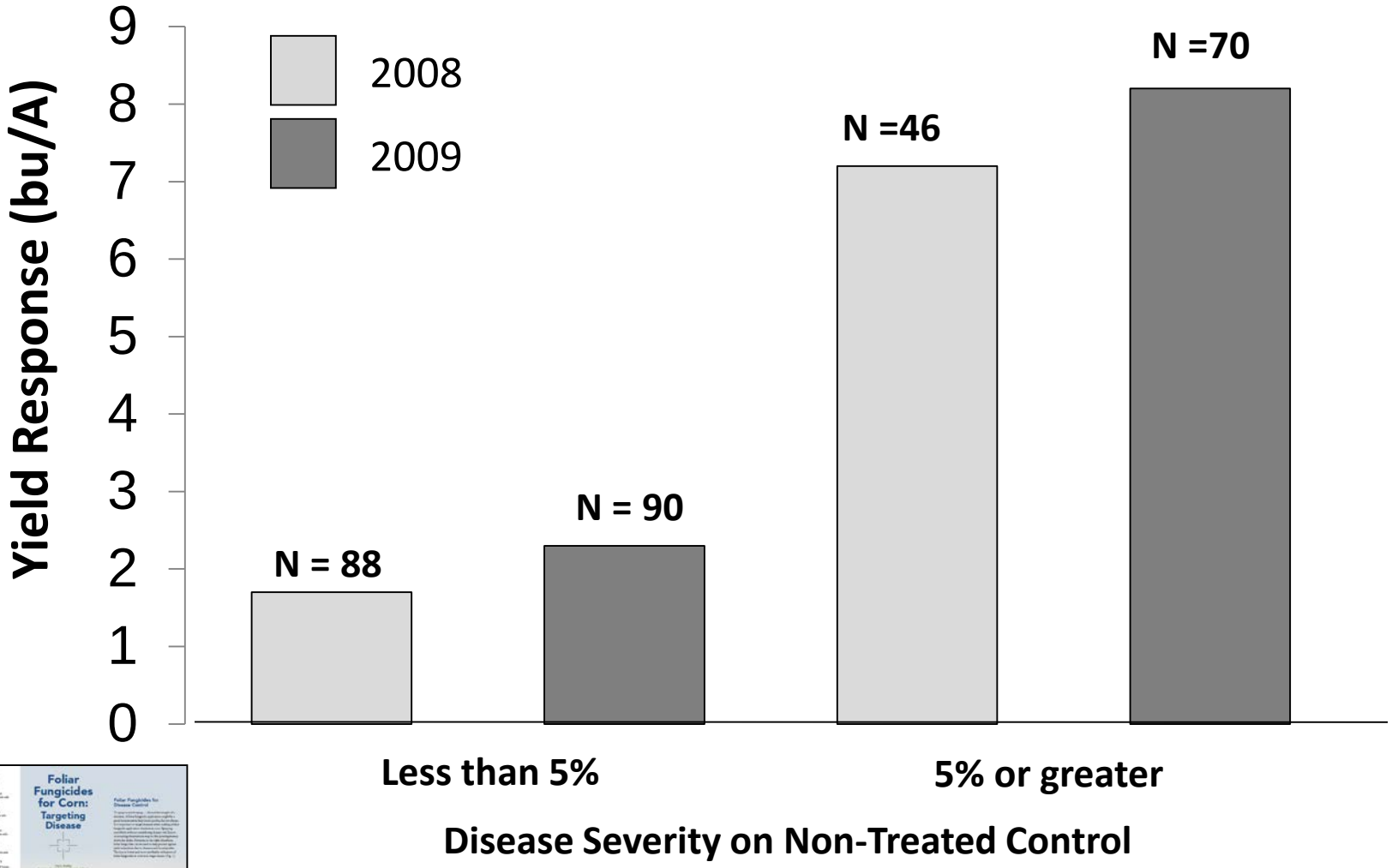
2014 Regional Corn Fungicide Summary Corn Disease Working Group

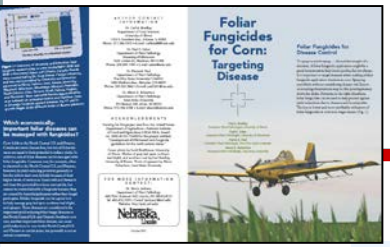
Members of CDWG
Summarized by Kiersten Wise

Yield response (bu/A) compared to nontreated control over time across 12 states + Ontario

Timing of application	2010 n = 160	2011 n = 57	2012 n = 343	2013 n = 425	2014 n = 462
Early (V5-V8)	3.4	2.1	-1.1	0.1	2.3
Standard (VT-R2)	4.5	0.4	4.9	4.5	7.6
Double (V5 + R1)	7.4	4.5	3.0	3.7	4.9

2008-09 Regional Corn Foliar Fungicide Trial Results





* Taken from: Foliar Fungicides for Corn: Targeting Disease (2010)

Nebraska Corn Fungicide Trials

UNL – SCAL near Clay Center, NE

Nebraska (Field) Corn Fungicide Trials

UNL – SCAL near Clay Center, NE

Neal, Jen, Justin, Brad

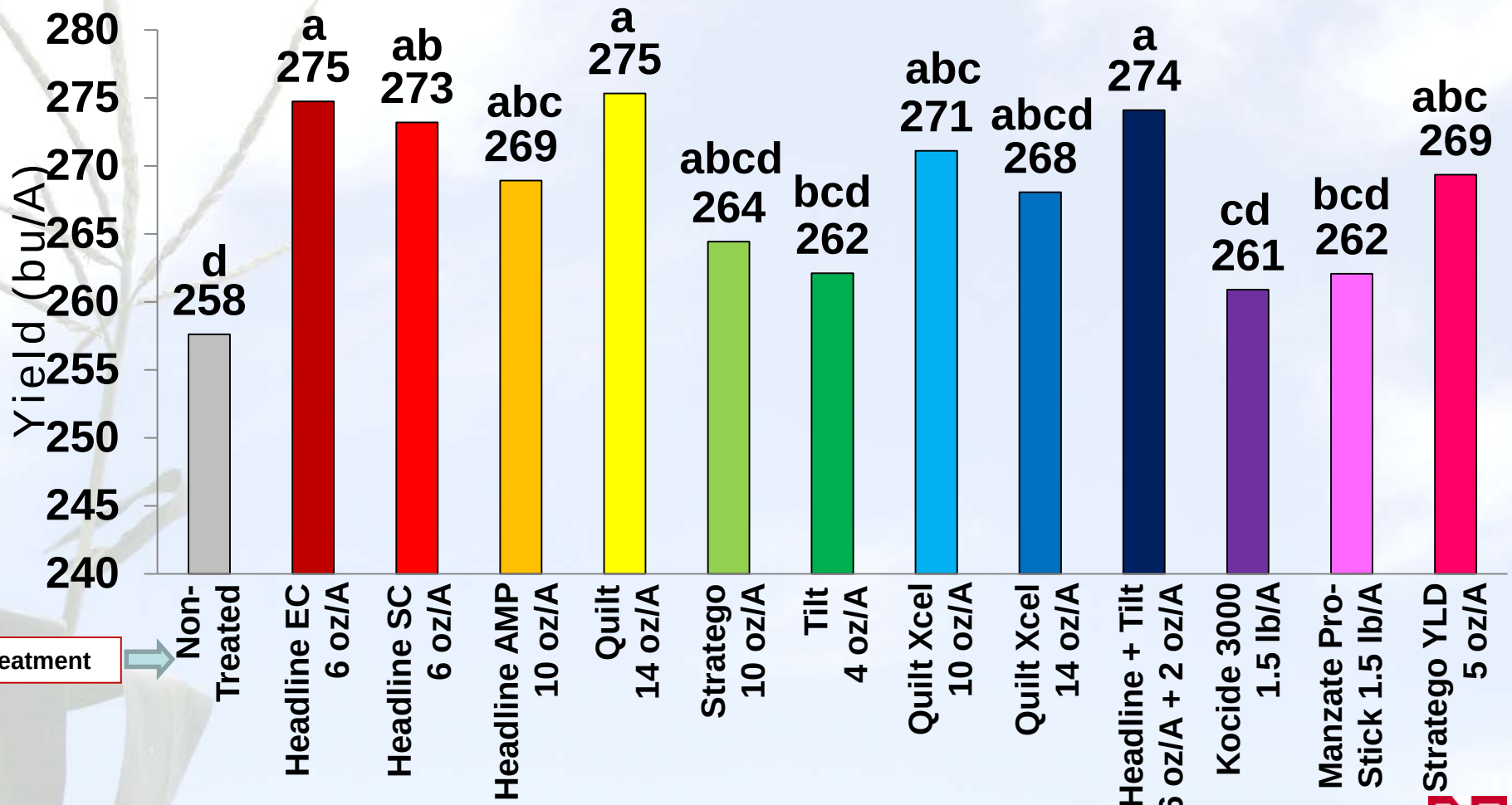
- Experiment Design
  - Plots: 4-rows wide, 40 ft. long
  - 6 replications/treatment
- Ground Application
  - 20 gpa
    - 40 psi
    - 3 mph
  - 6-nozzle boom
    - 11002 nozzles

EXTENSION

2009 Fungicide Comparison Trial in NE

DKC 60-18 (GLS rating = 7/fair)

Planted 5/6/09, VT Application 7/17/09

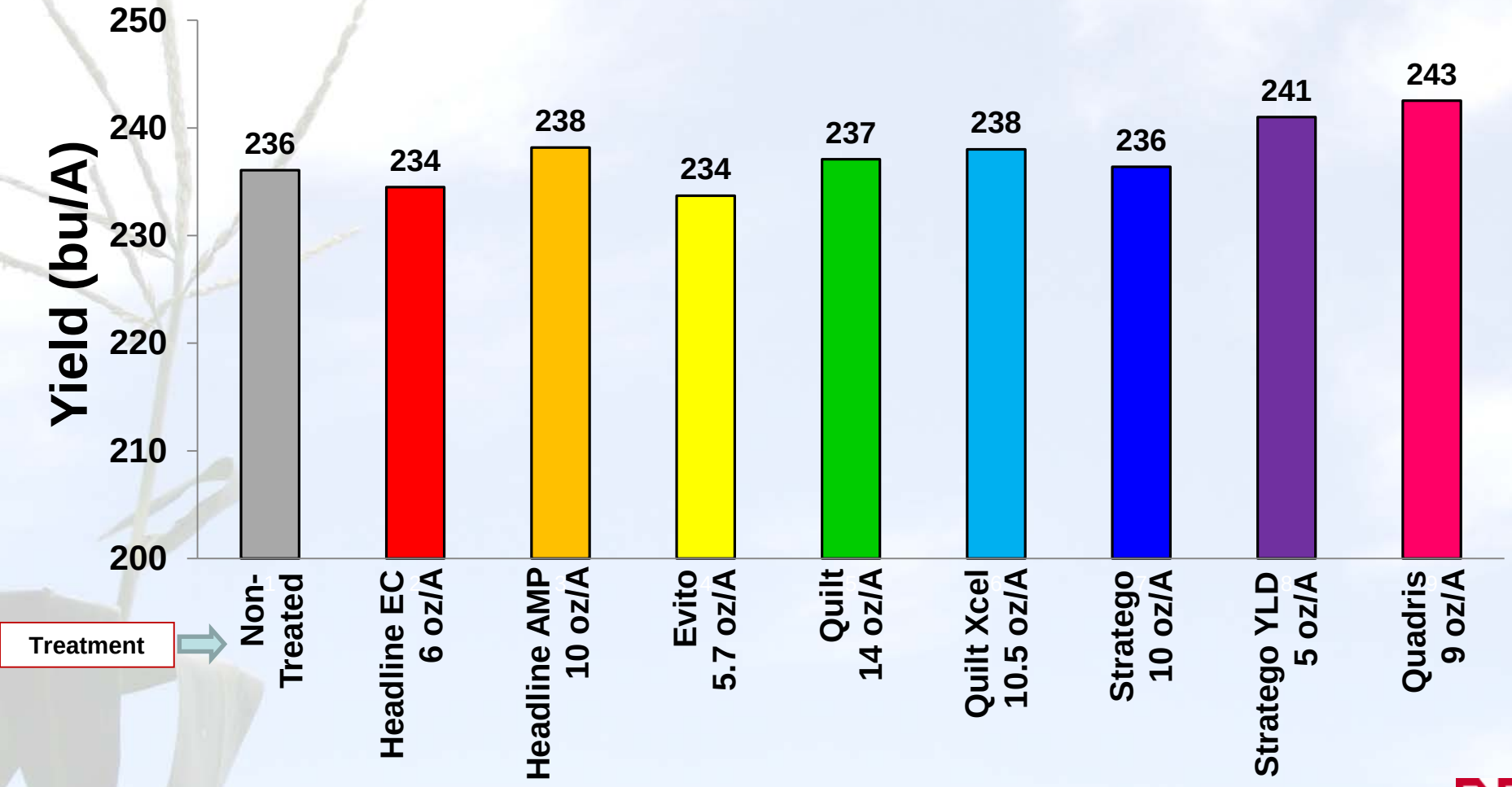


UNL South Central Agricultural Lab near Clay Center, NE

2010 Fungicide Comparison Trial in NE

Yield (bu/A)

R1 Application 7/15/10 - DKC 61-69 (GLS rating = 5/good)

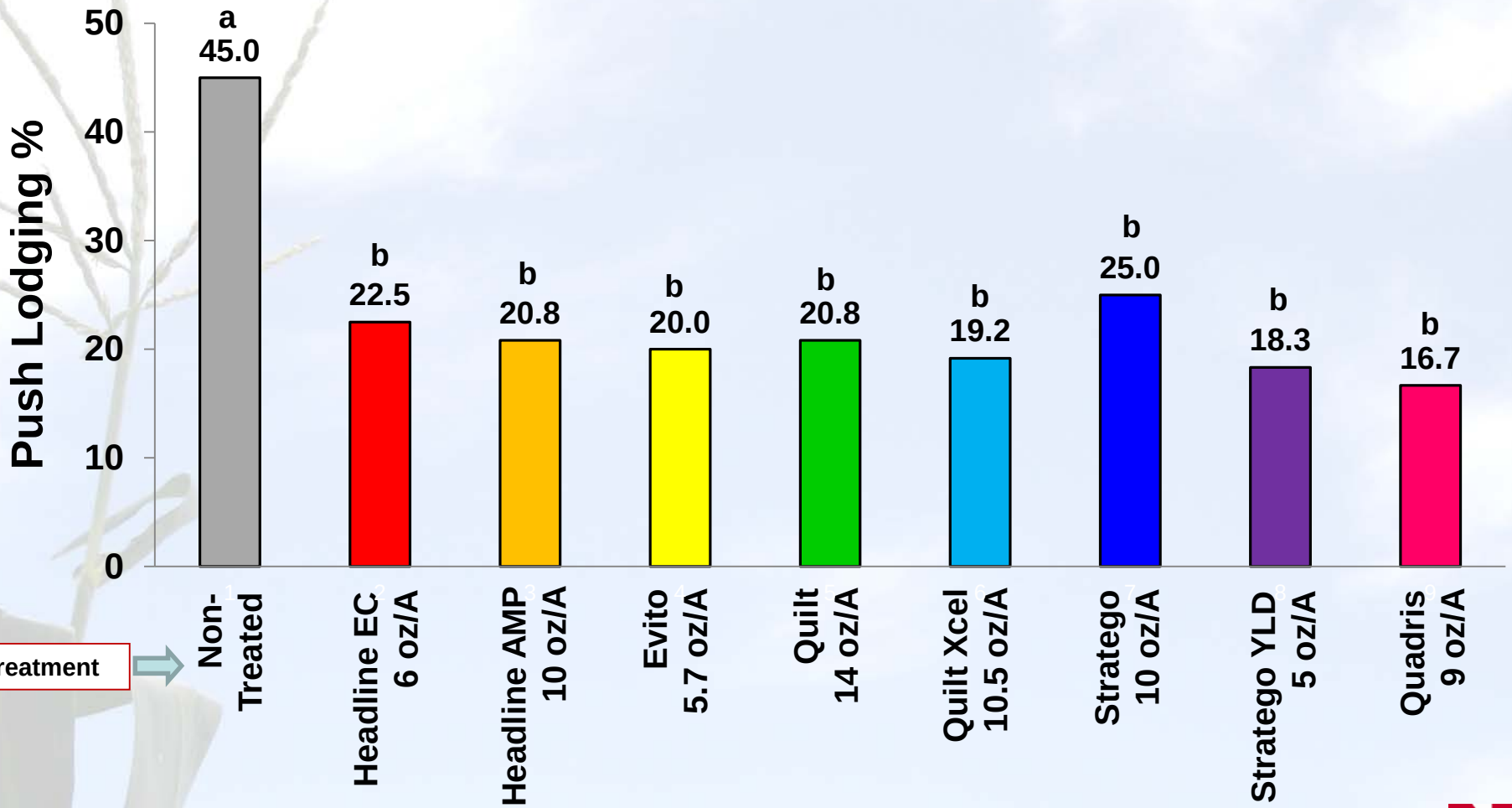


*No statistical differences between treatments. Coefficient of variation is 4.3%

2010 Fungicide Comparison Trial in NE

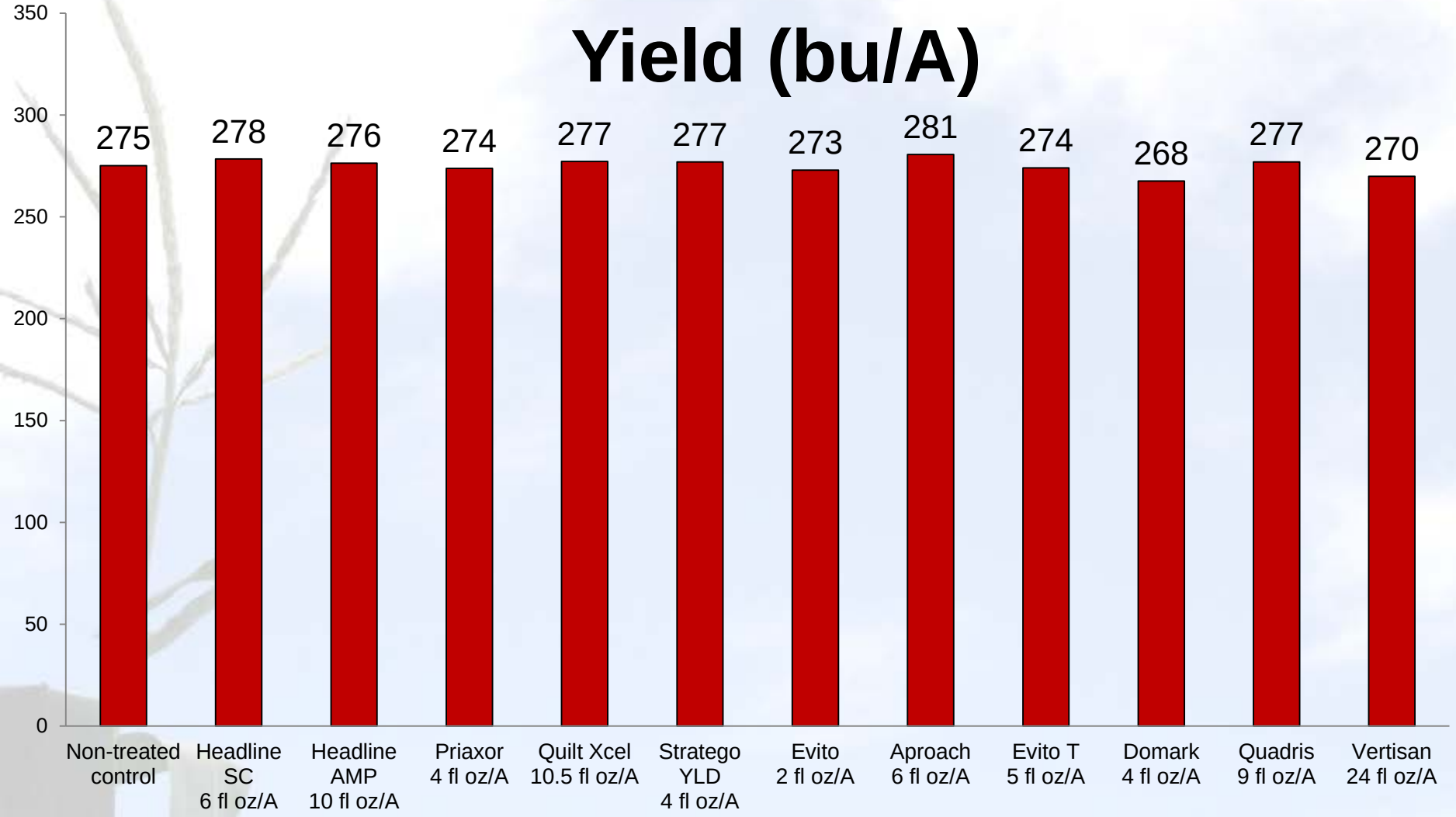
Push Lodging % assessed on October 7, 2010

R1 Application 7/15/10 - DKC 61-69 (GLS rating = 5/good)



*Treatments with different letters are statistically different. Coefficient of variation is 45.5%

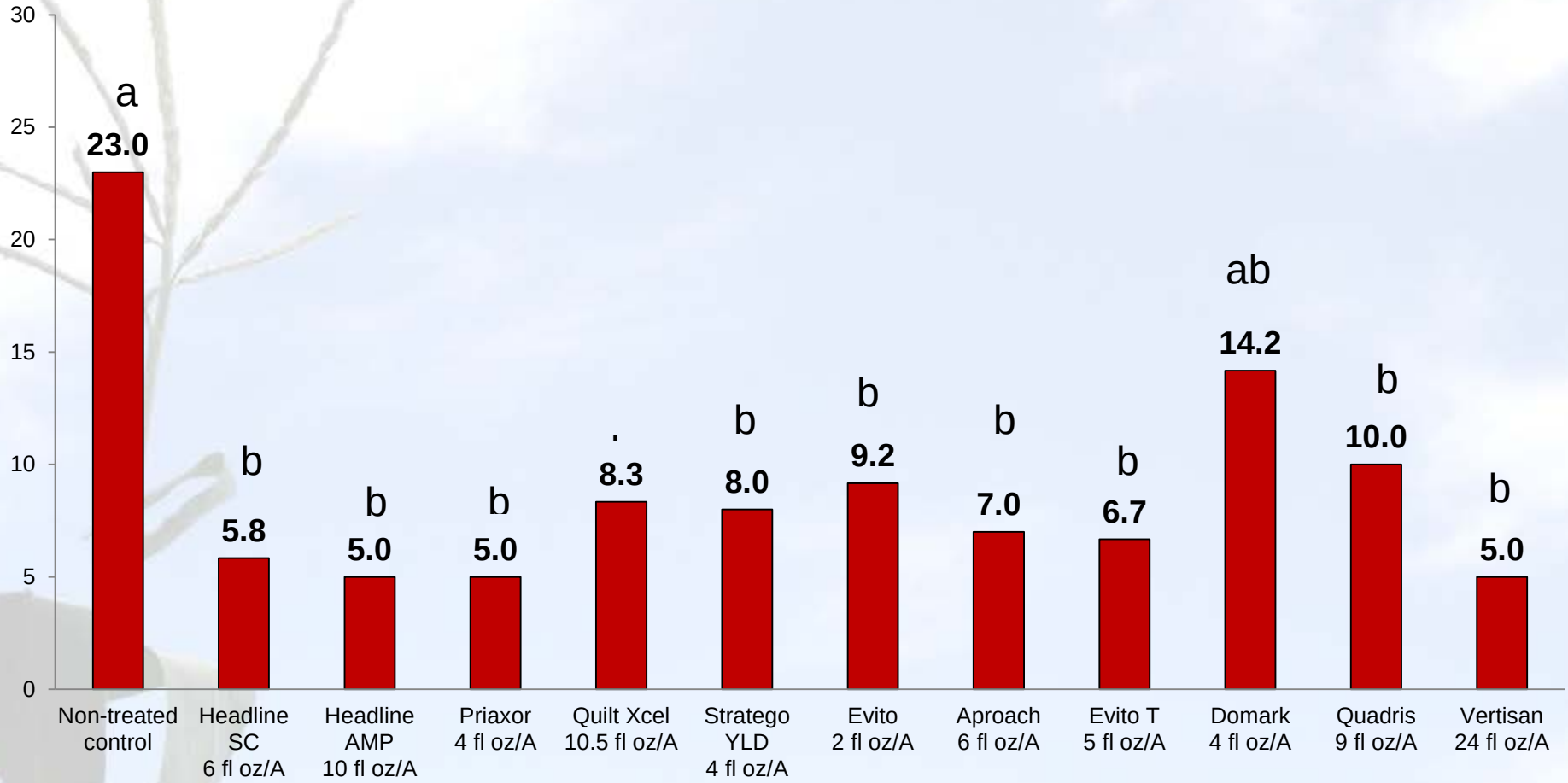
2012 Foliar Fungicide Comparison Trial



Treatments made at R1 on July 5, 2012
No statistical differences
UNL – SCAL Clay Center, NE – DKC 64-83

2012 Foliar Fungicide Comparison Trial

Push Lodging (%)



Treatments made at R1 on July 5, 2012

UNL-SCAL Clay Center, NE

V5 Application

- V5 = 6/16/2016

- VT = 7/21/2016

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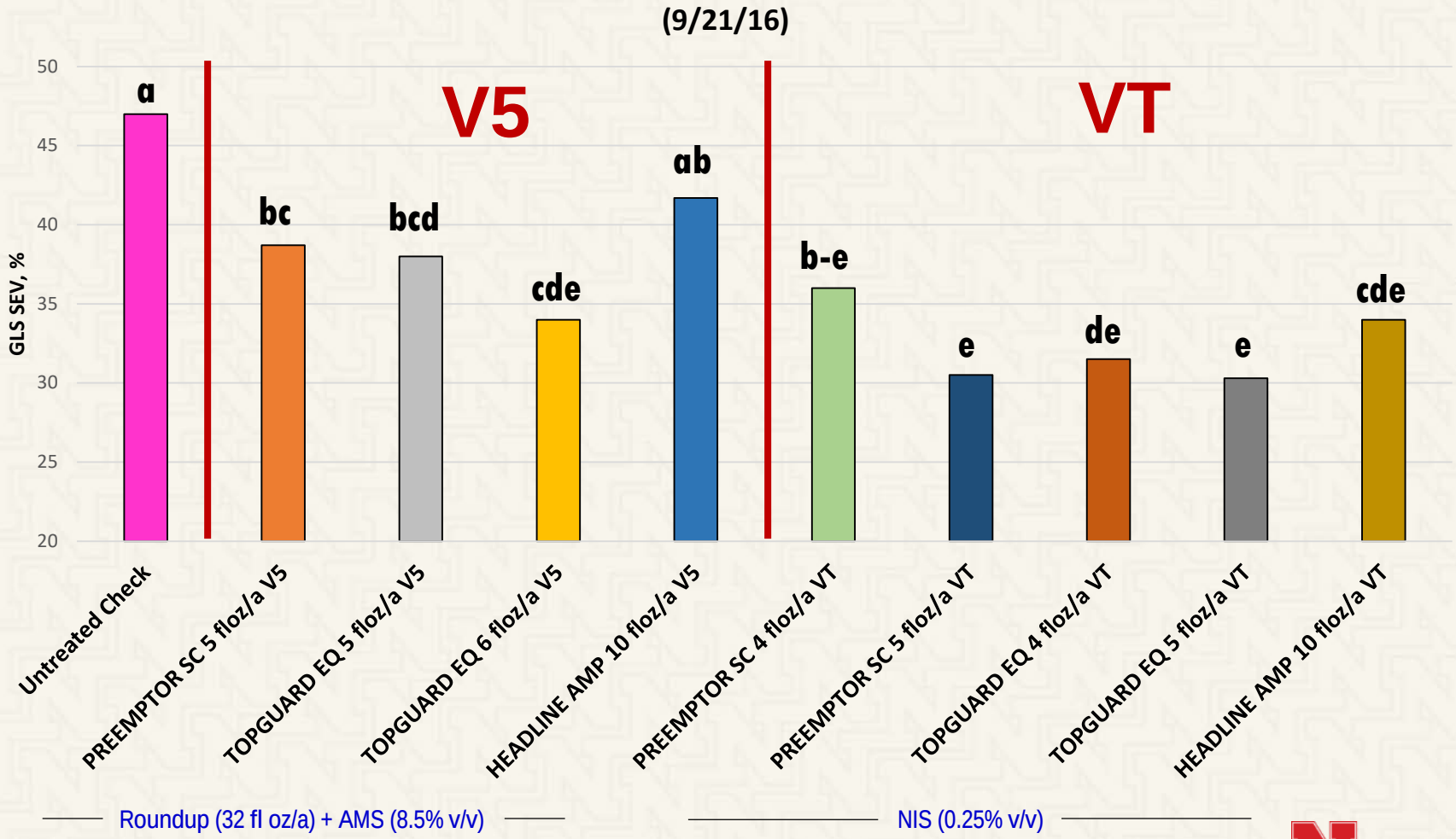
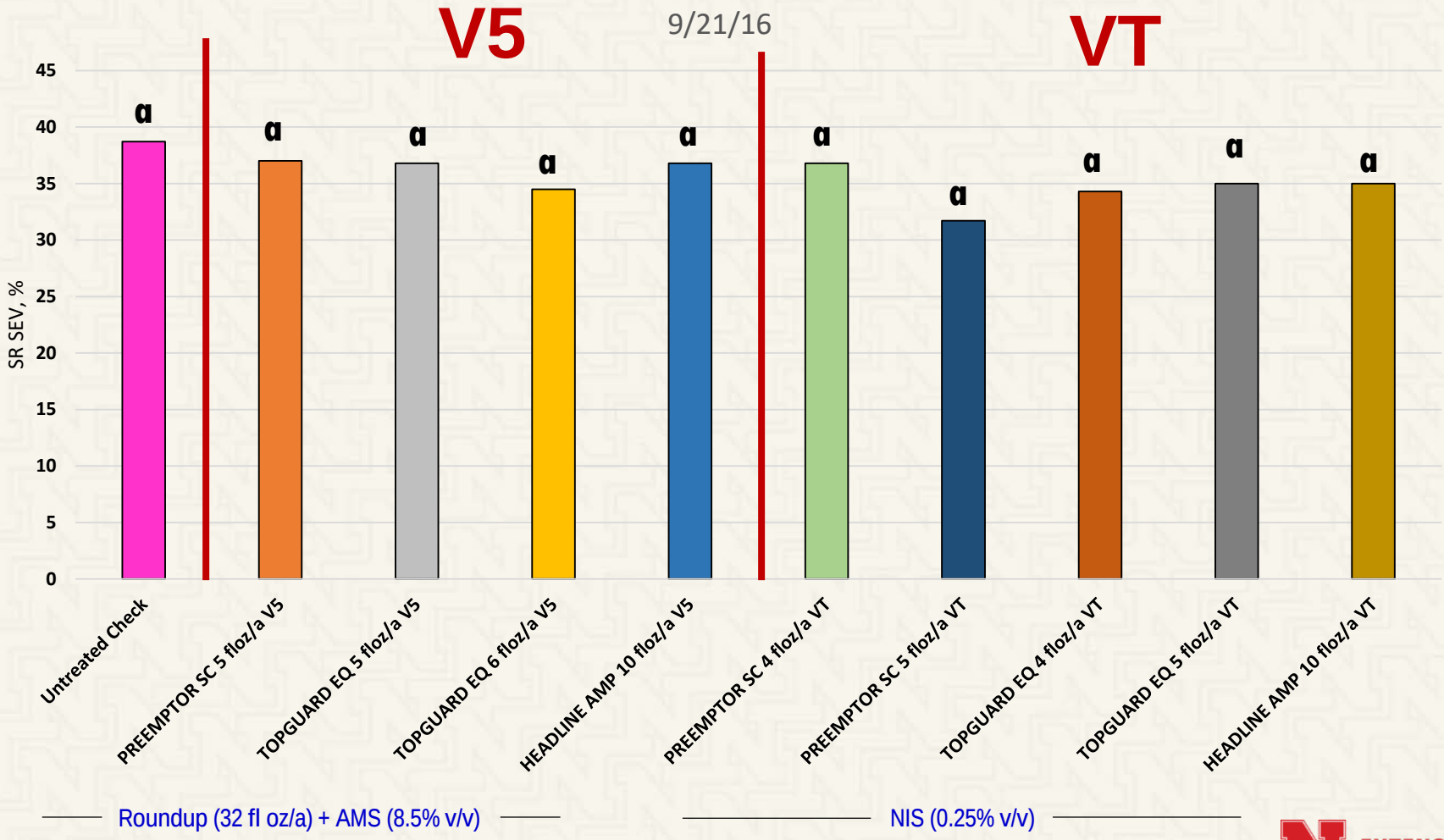
Gray Leaf Spot Severity, 62 DAT



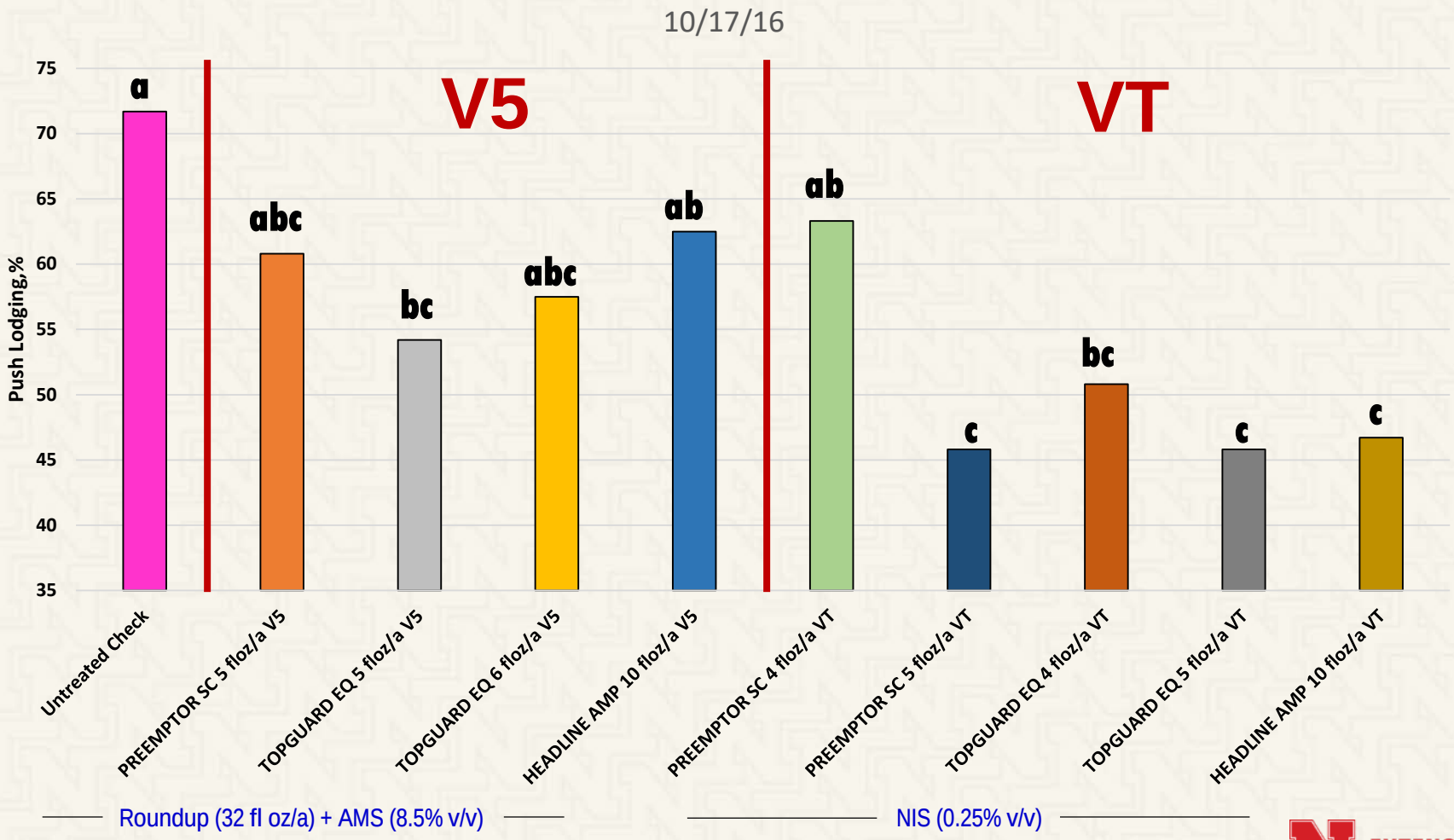
UNL South Central Ag Lab, near Clay Center, NE

Southern Rust, 62 DAT



UNL South Central Ag Lab, near Clay Center, NE

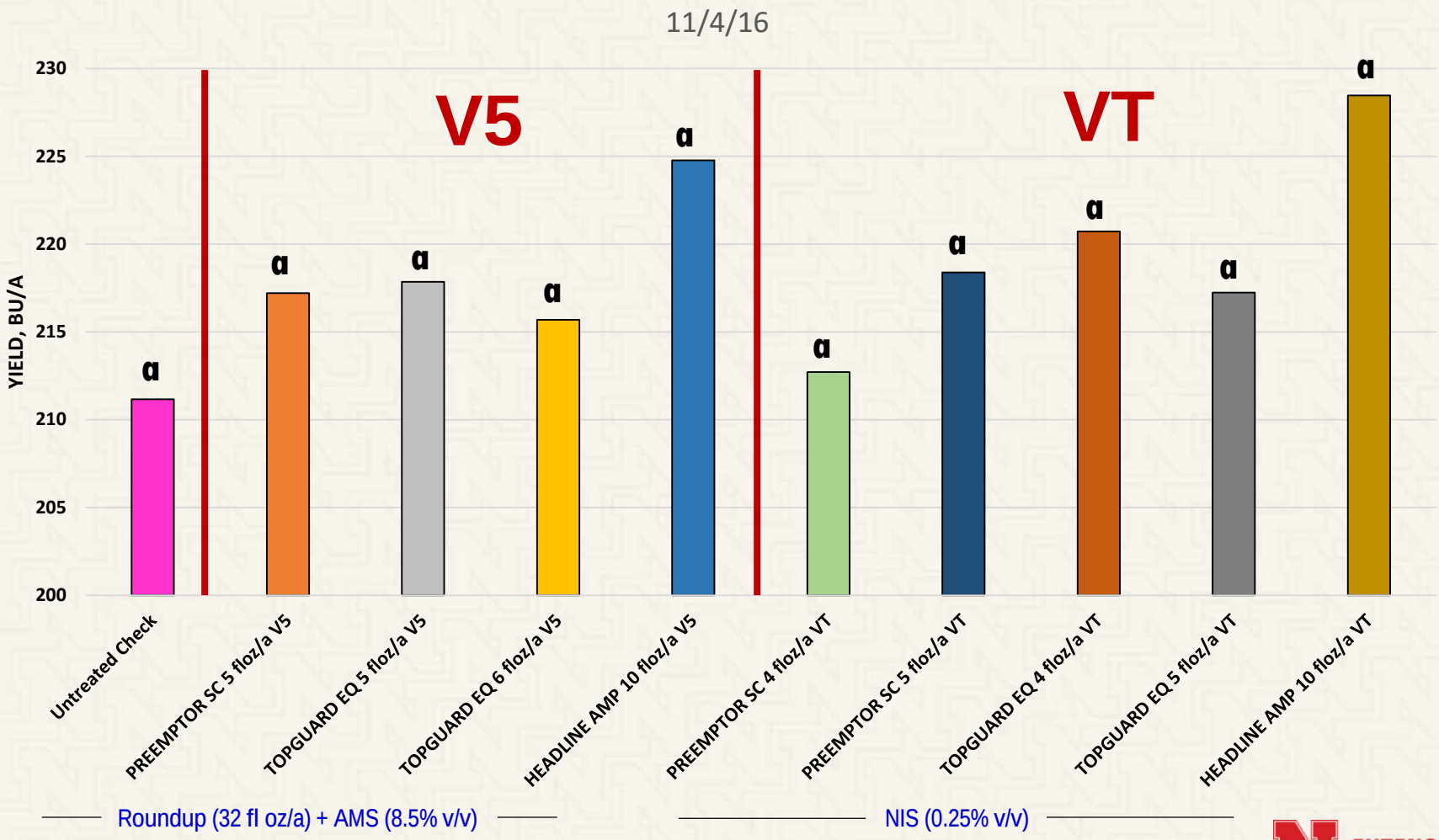
Push Lodging, 88 DAT



UNL South Central Ag Lab, near Clay Center, NE

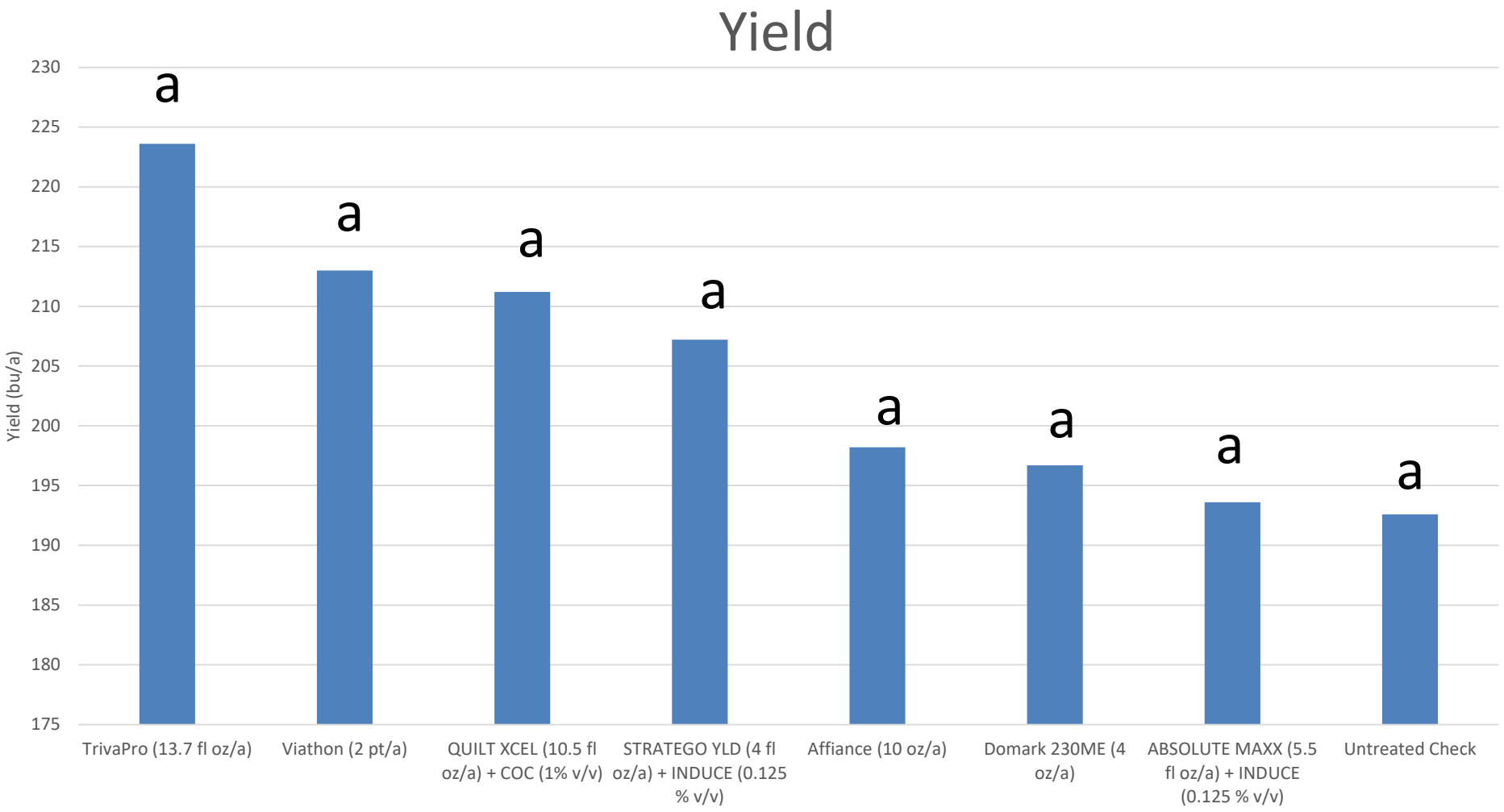
LSD (0.1) = 15 bu
CV = 7.04%

Yield, bu/a

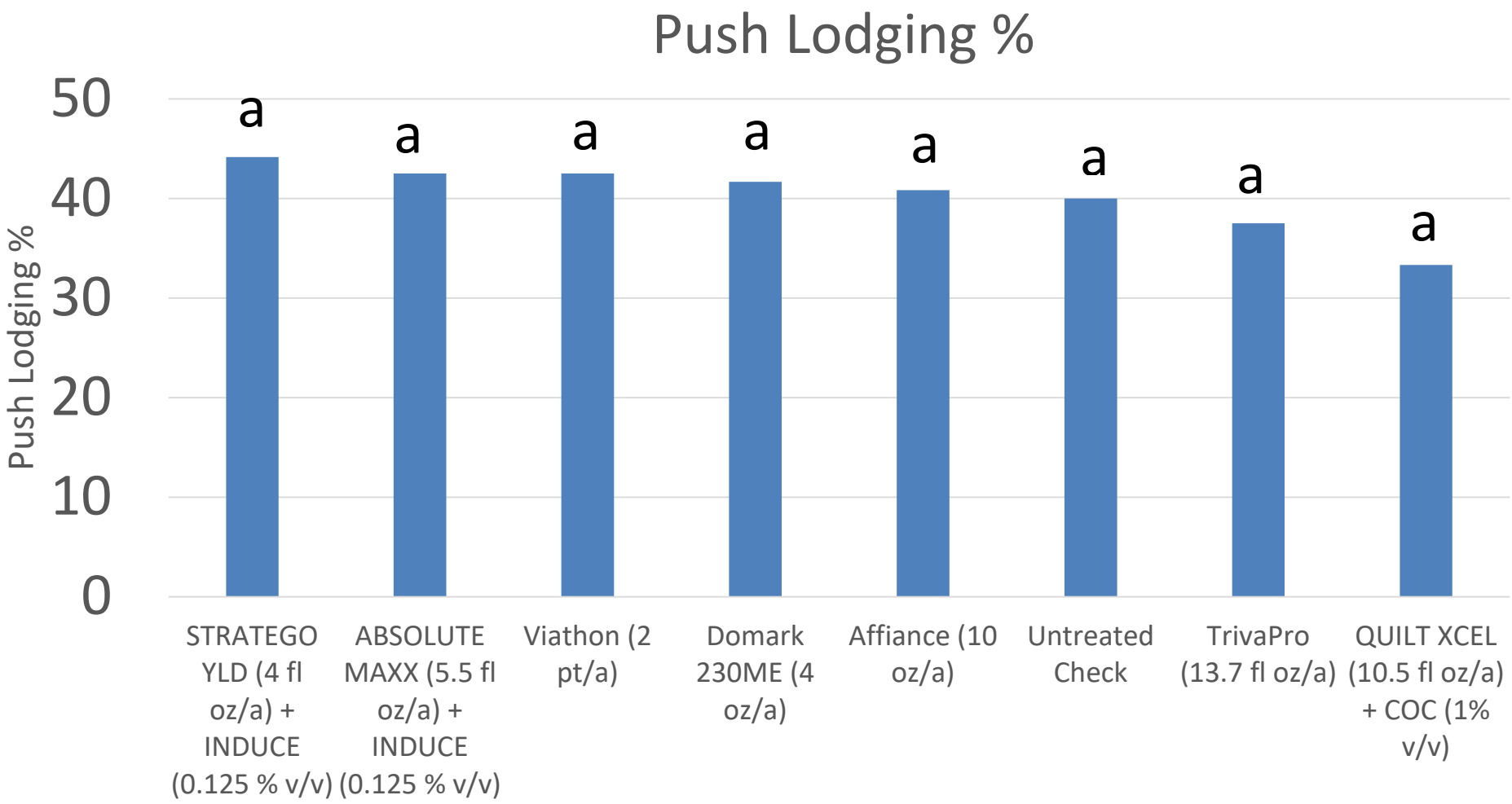


UNL South Central Ag Lab, near Clay Center, NE

2017 Foliar Fungicide Comparison Trial



2017 Foliar Fungicide Comparison Trial



Statistical significance of collected data from Plant Path Corn Trials conducted in NE (2009-2016).

Year	Trials	Evaluation with significant data		The Same Trial Containing both Significant Push Lodging & Yield
		Push Lodging	Yield	
	-- no. / yr --	----- no. of total trials ----		------- no. of trials -------
2009	12	5	5	2
2010	13	8	3	2
2011	17	3	3	1
2012	14	2	5	0
2013	8	3	2	1
2014	12	4	2	0
2015	17	4	1	1
2016	14	8	8	5

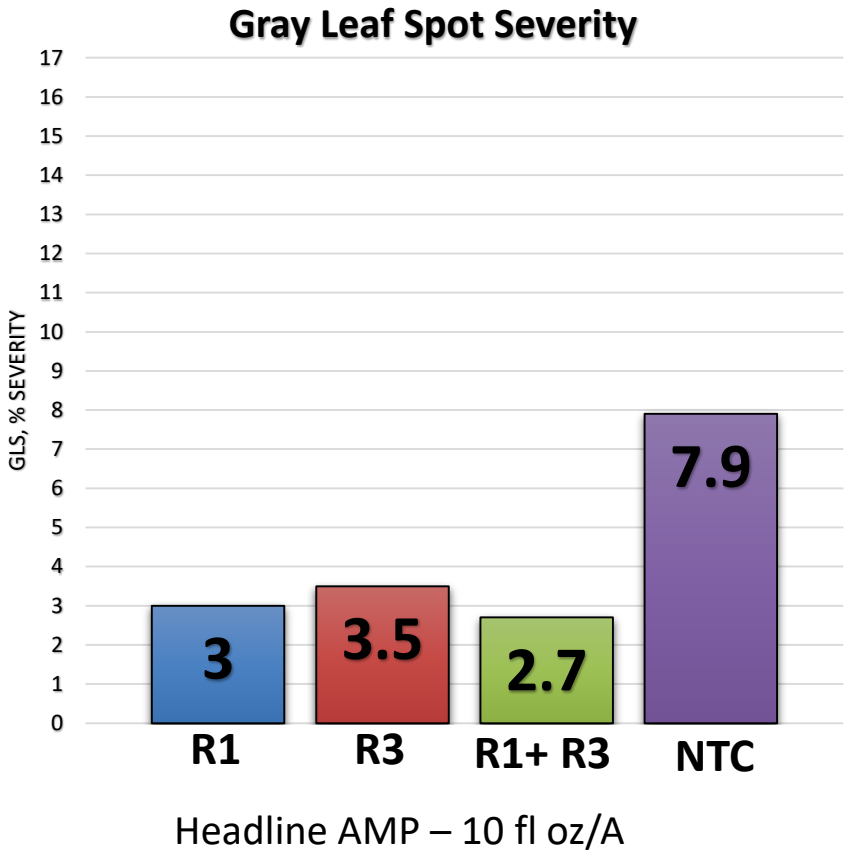
p-Value 0.1

Corn Disease Resources

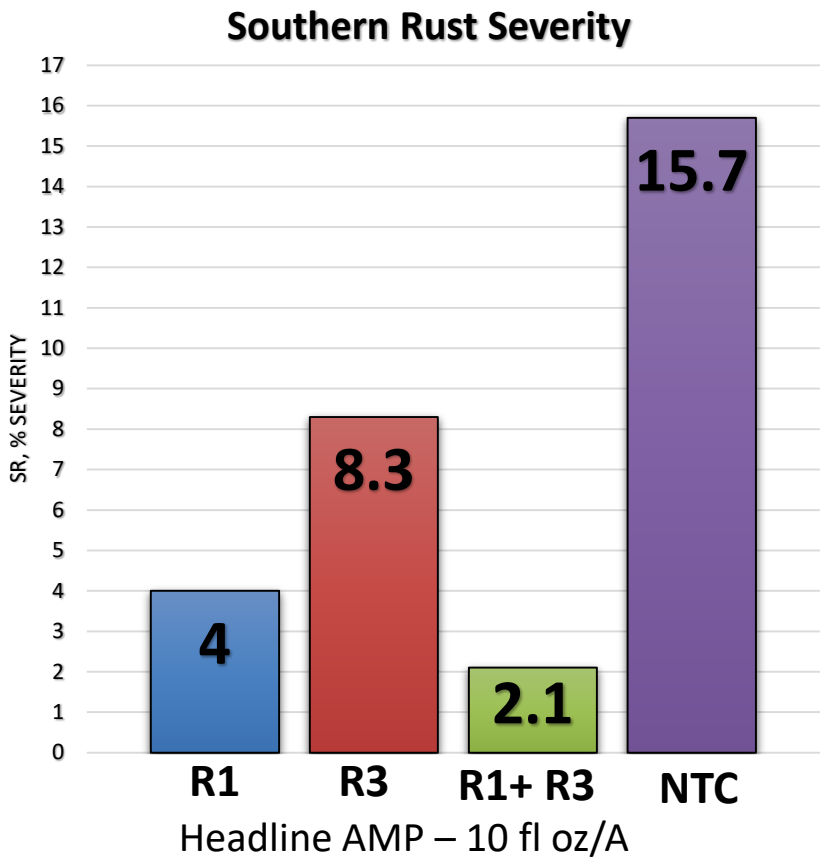
- Crop Watch - http://cropwatch.unl.edu/
  - Newsletter, efficacy trial data, and publications
- Market Journal – weekly episode or see videos at: http://marketjournal.unl.edu/corndiseases
- Videos – YouTube – UNL CropWatch channel
  - short Corn Disease videos
- Crop Protection Network http://cropprotectionnetwork.org
- Tamra Jackson-Ziems on Twitter - @tjcksn
- Contact local county Extension office

EXTENSION

Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln cooperating with the Counties and the United States Department of Agriculture.



Headline AMP – 10 fl oz/A



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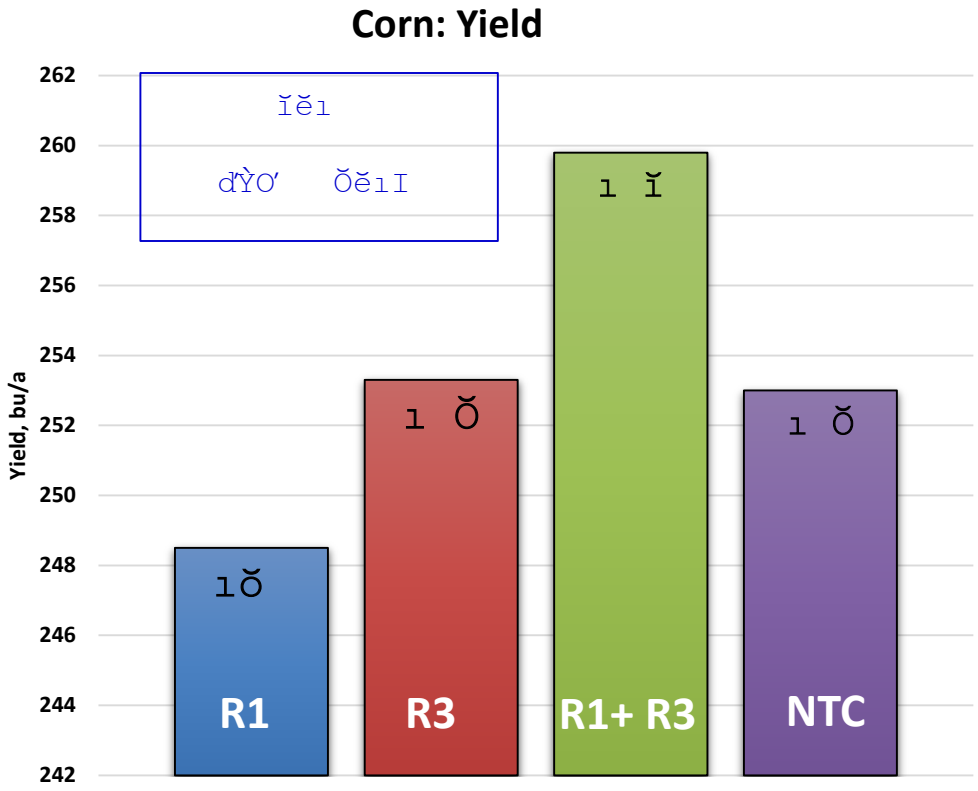
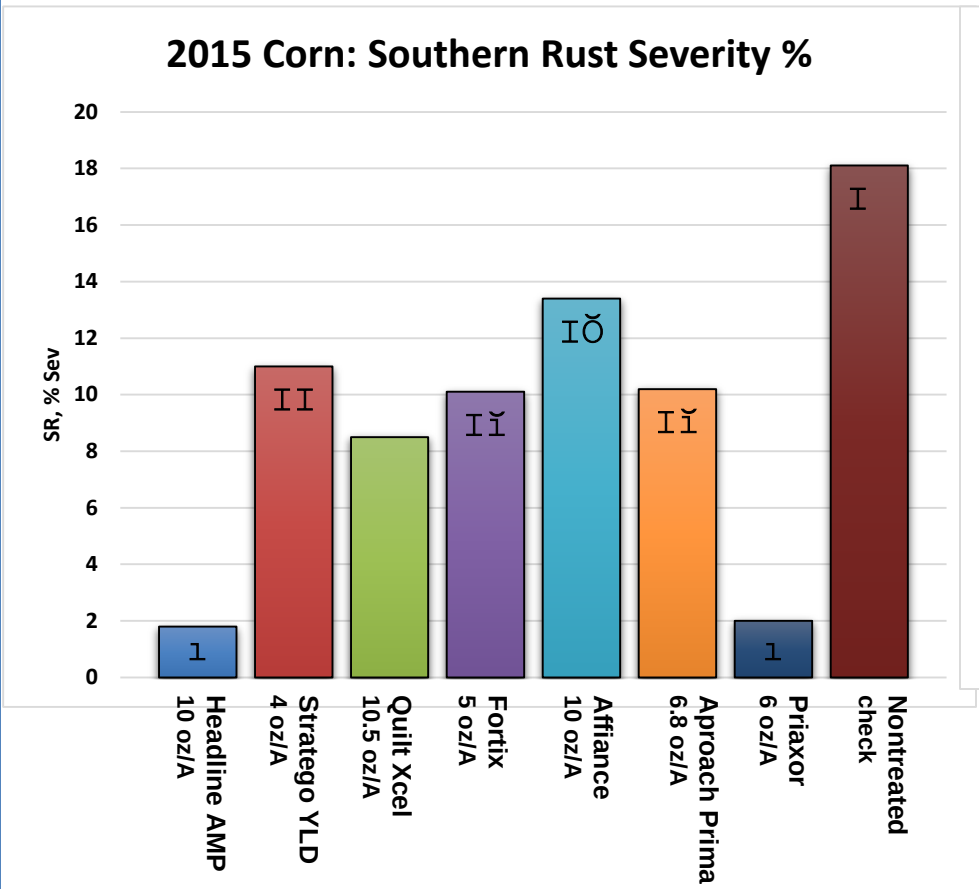
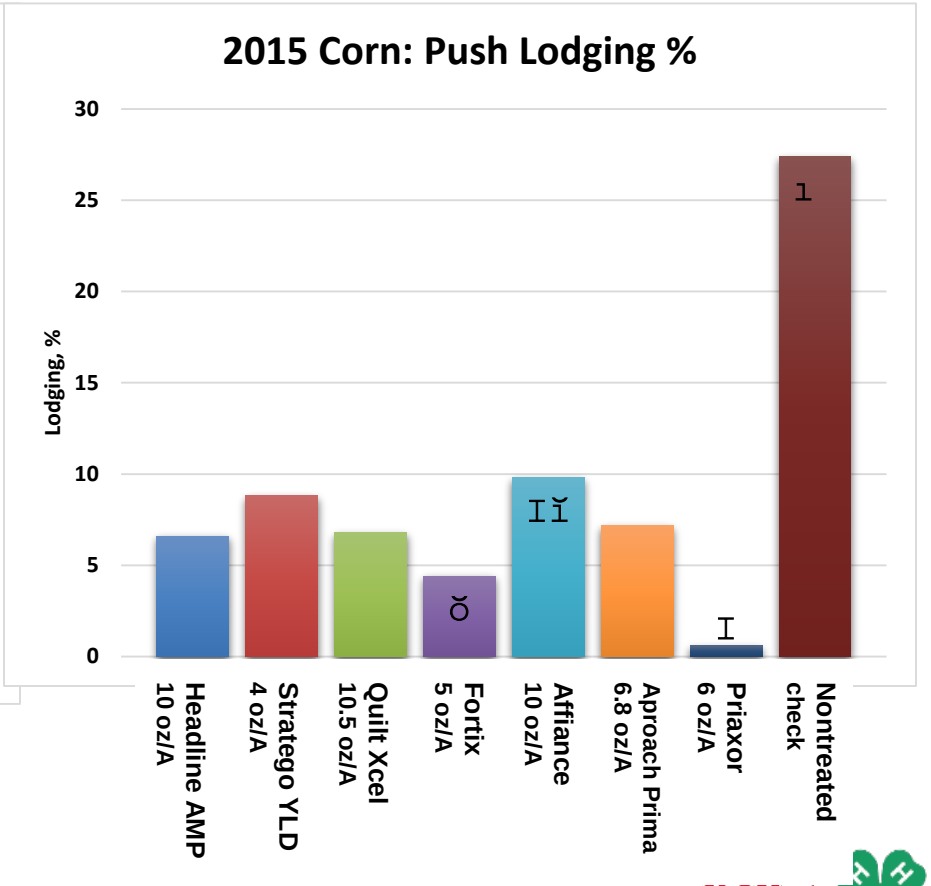


Headline AMP – 10 fl oz/A

Various Fungicide Modes of Action Applied at R2 (Blister) vs. Southern Rust





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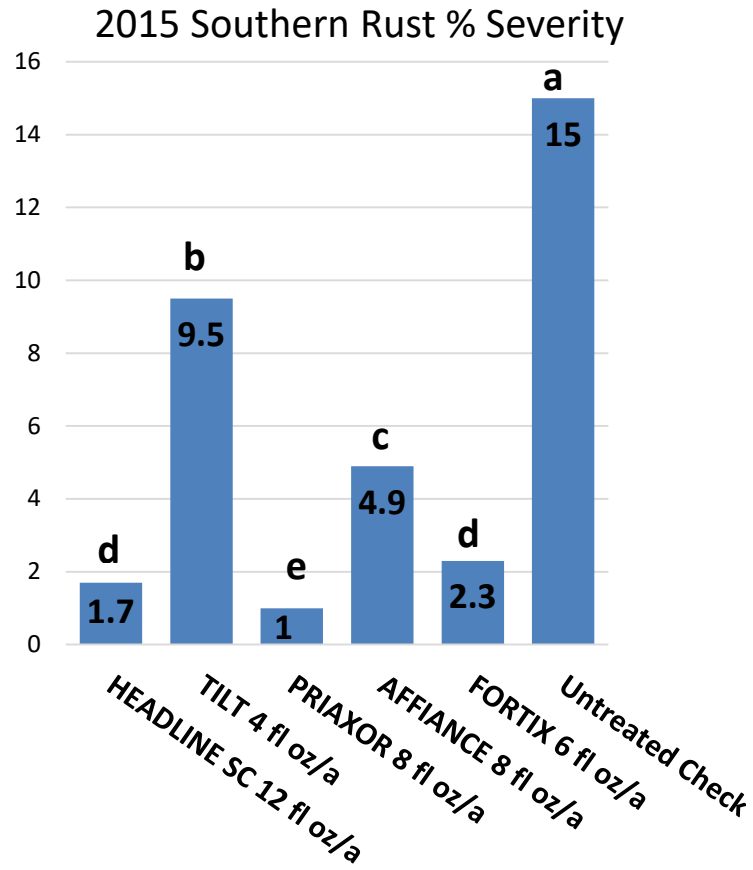

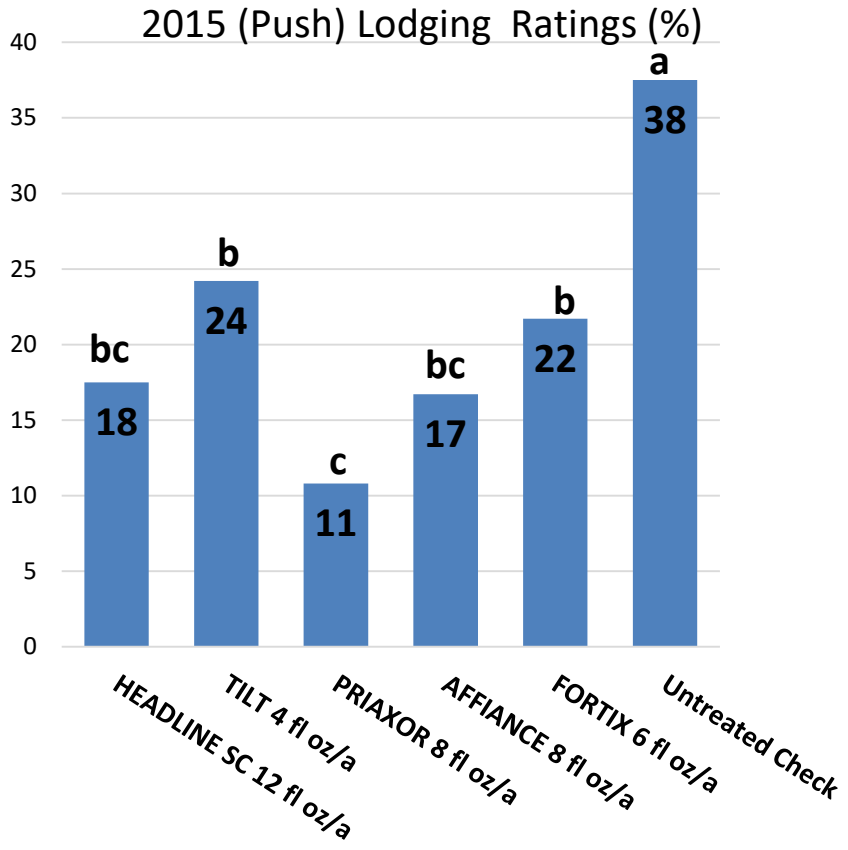

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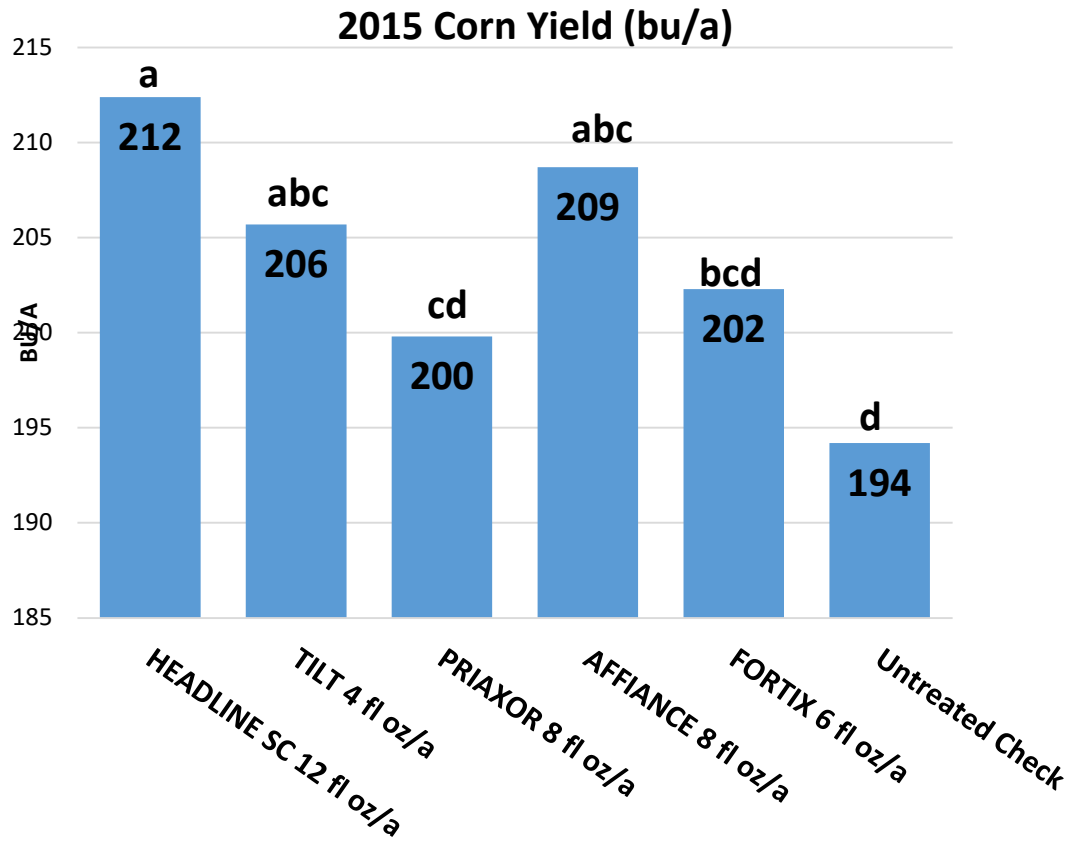

EXTENSION