

# Trial Info.



- Planted: May 5, 2025
- Inoculated\*: July 2, 2025
- Harvested: September 27, 2025
- Location: Akron Twp, Wilkin County, MN
- Variety: BTS 7170 (CR+)
  - CLS Rating = 2.52
- Objective: Evaluate the yield and quality response (if any) of applying differing fungicide tank mixtures.

*\*This trial was inoculated, meaning we ensured that CLS was present by spreading infected leaves from the previous season, and as such was conducted under very high disease pressure. Disease ratings from this trial are higher than what we would expect in a typical field environment.*



## 2025 CR+: CLS Program ~ Order

Minn-Dak Farmers Cooperative

Treatment #	Treatment Name	Products Applied	Application Date				
1	Proline app. 1 / Provysol app. 5	Proline + Manzate + NIS	June 30, 2025				
		AgriTin + Topsin	July 14, 2025				
		Headline + Manzate	July 29, 2025				
		AgriTin + Manzate	August 11, 2025				
		Provysol + Manzate	August 25, 2025				
		AgriTin + Manzate	September 8, 2025				
2	Proline app. 1 / Inspire XT app. 5	Proline + Manzate + NIS	June 30, 2025				
		AgriTin + Topsin	July 14, 2025				
		Headline + Manzate	July 29, 2025				
		AgriTin + Manzate	August 11, 2025				
		Inspire XT + Manzate	August 25, 2025				
		AgriTin + Manzate	September 8, 2025				
3	Headline app. 1 / Proline app. 3	Headline + Manzate	June 30, 2025				
		AgriTin + Topsin	July 14, 2025				
		Proline + Manzate + NIS	July 29, 2025				
		AgriTin + Manzate	August 11, 2025				
		Provysol + Manzate	August 25, 2025				
		AgriTin + Manzate	September 8, 2025				
4	Headline app. 1 / Proline app. 2	Headline + Manzate	June 30, 2025				
		Proline + Manzate + NIS	July 14, 2025				
		AgriTin + Topsin	July 29, 2025				
		Provysol + Manzate	August 11, 2025				
		AgriTin + Manzate	August 25, 2025				
		Manzate	September 8, 2025				
5	Proline app. 1 / Headline app. 2	Proline + Manzate + NIS	June 30, 2025				
		Headline + Manzate	July 14, 2025				
		AgriTin + Topsin	July 29, 2025				
		Provysol + Manzate	August 11, 2025				
		AgriTin + Manzate	August 25, 2025				
		Manzate	September 8, 2025				

Rates:

Manzate Max	1.6 qt/a
Proline 480 SC	5.7 fl oz/a
NIS	0.125% v/v
AgriTin	8 fl oz/a
Topsin	10 fl oz/a
Headline	9 fl oz/a
Provysol	4 fl oz/a
Inspire XT	7 fl oz/a
Verpixo	20.5 fl oz/a



6	EBDC app. 1	Manzate	June 30, 2025				
		Proline + Manzate + NIS	July 14, 2025				
		Headline + Manzate	July 29, 2025				
		AgriTin + Topsin	August 11, 2025				
		Provysol + Manzate	August 25, 2025				
		AgriTin + Manzate	September 8, 2025				
7	ACSC rec.	Proline + Manzate + NIS	June 30, 2025				
		Manzate	July 14, 2025				
		AgriTin + Topsin	July 29, 2025				
		Provysol + Manzate	August 11, 2025				
		Manzate	August 25, 2025				
		Headline + AgriTin	September 8, 2025				
8	Headline app. 3 / Verpixo app. 4	Proline + Manzate + NIS	June 30, 2025				
		AgriTin + Topsin	July 14, 2025				
		Headline + Manzate	July 29, 2025				
		Verpixo + Manzate	August 11, 2025				
		AgriTin + Manzate	August 25, 2025				
		Provysol + Manzate	September 8, 2025				
9	Headline app. 2 / Verpixo app. 4	Proline + Manzate + NIS	June 30, 2025				
		Headline + Manzate	July 14, 2025				
		AgriTin + Topsin	July 29, 2025				
		Verpixo + Manzate	August 11, 2025				
		Provysol + Manzate	August 25, 2025				
		AgriTin + Manzate	September 8, 2025				
10	Verpixo app. 1	Verpixo + Manzate	June 30, 2025				
		Proline + Manzate + NIS	July 14, 2025				
		Headline + Manzate	July 29, 2025				
		AgriTin + Manzate	August 11, 2025				
		Provysol + Manzate	August 25, 2025				
		AgriTin + Manzate	September 8, 2025				
11	Untreated Check						

<u>Rates:</u>	
Manzate Max	1.6 qt/a
Proline 480 SC	5.7 fl oz/a
NIS	0.125% v/v
AgriTin	8 fl oz/a
Topsin	10 fl oz/a
Headline	9 fl oz/a
Provysol	4 fl oz/a
Inspire XT	7 fl oz/a
Verpixo	20.5 fl oz/a



<b><i>Applications</i></b>						
<i>Date:</i>	Jun-30-2025	Jul-14-2025	Jul-29-2025	Aug-11-2025	Aug-25-2025	Sep-8-2025
<i>Start Time:</i>	4:38 PM	4:36 PM	2:34 PM	3:11 PM	1:45 PM	12:50 PM
<i>End Time:</i>	5:40 PM	5:31 PM	3:37 PM	4:00 PM	2:25 PM	1:39 PM
<i>Application Method:</i>	Spray	Spray	Spray	Spray	Spray	Spray
<i>Application Timing:</i>	Preventative	Fixed Interval	Fixed Interval	Fixed Interval	Fixed Interval	Fixed Interval
<i>Application Placement:</i>	Foliar	Foliar	Foliar	Foliar	Foliar	Foliar
<i>Temperature (F):</i>	75	89	80	84	68	72
<i>Humidity (%):</i>	63	48	63	66	47	67
<i>Wind Velocity (MPH):</i>	7	4.5	3	3	4	4
<i>Wind Direction:</i>	NW	SSE	N	S	NW	S

# CLS Rating Scale



**Category 1**  
1-5 spots/leaf  
0.1% severity



**Category 2**  
6-12 spots/leaf  
0.35% severity



**Category 3**  
13-25 spots/leaf  
0.75% severity



**Category 4**  
26-50 spots/leaf  
1.5% severity



**Category 5**  
51-75 spots/leaf  
2.5% severity



**Category 6**  
3% severity  
PROVEN ECONOMIC DAMAGE



**Category 7**  
6% severity



**Category 8**  
12% severity



**Category 9**  
25% severity



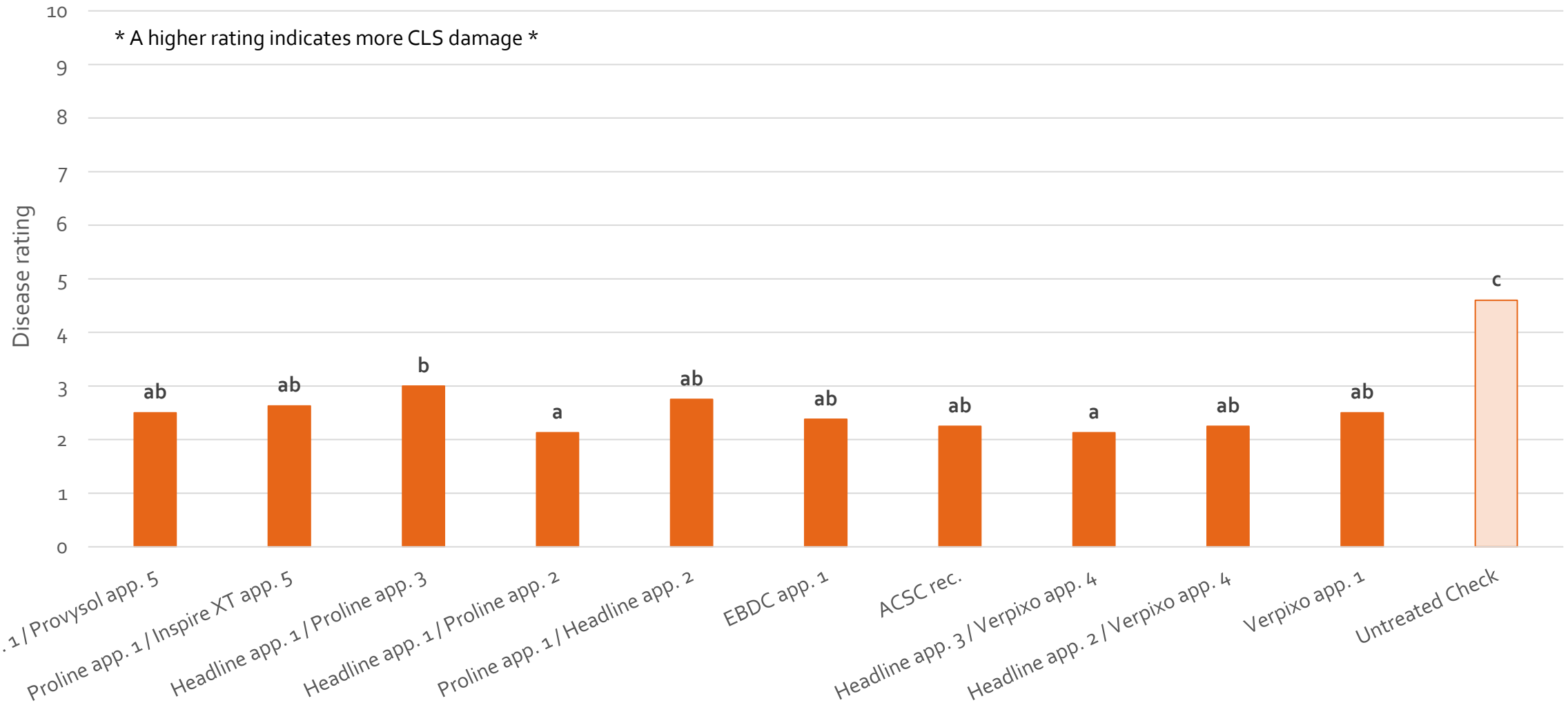
**Category 10**  
50% severity

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 0.83  
CV: 26.21



### CLS Rating – August 1, 2025



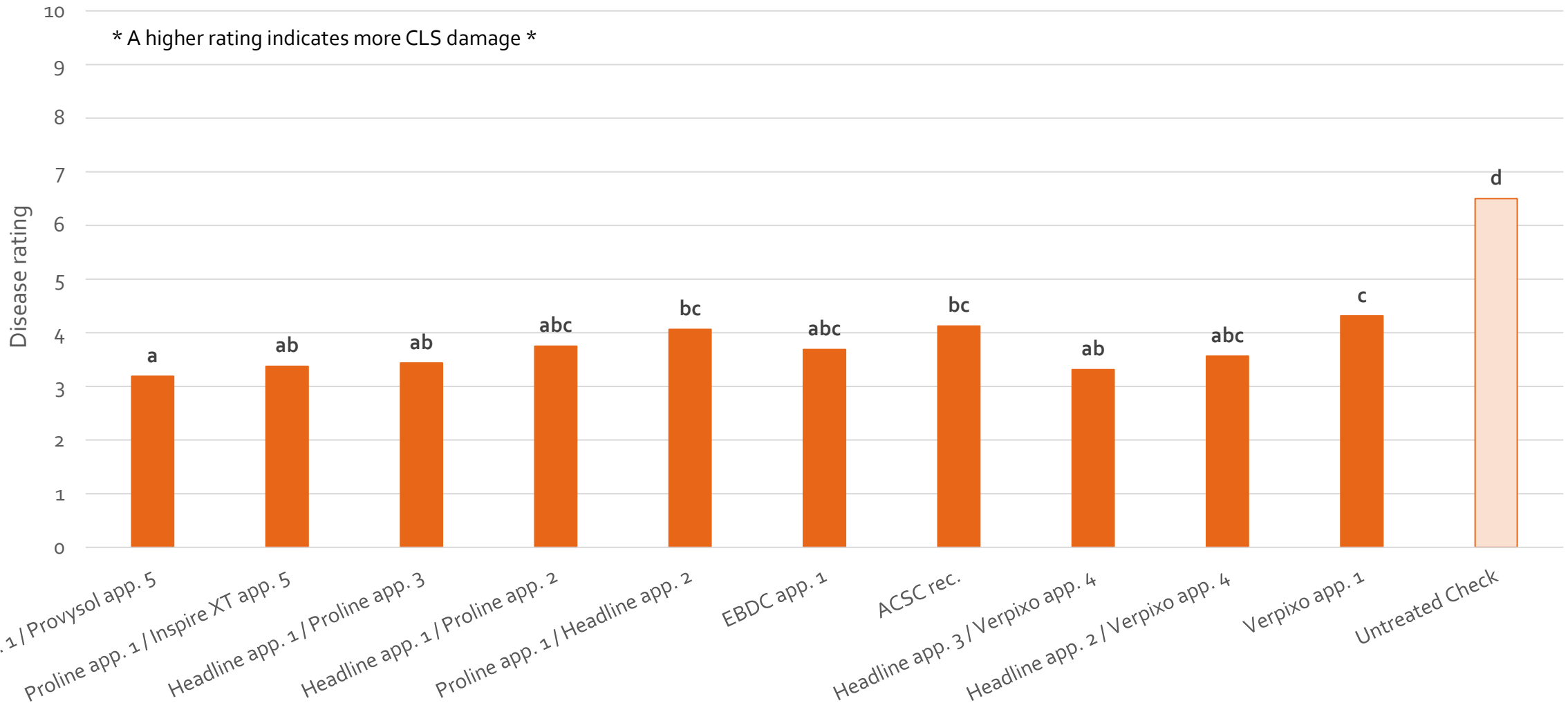
\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 0.82  
CV: 17.44



## CLS Rating – August 7, 2025



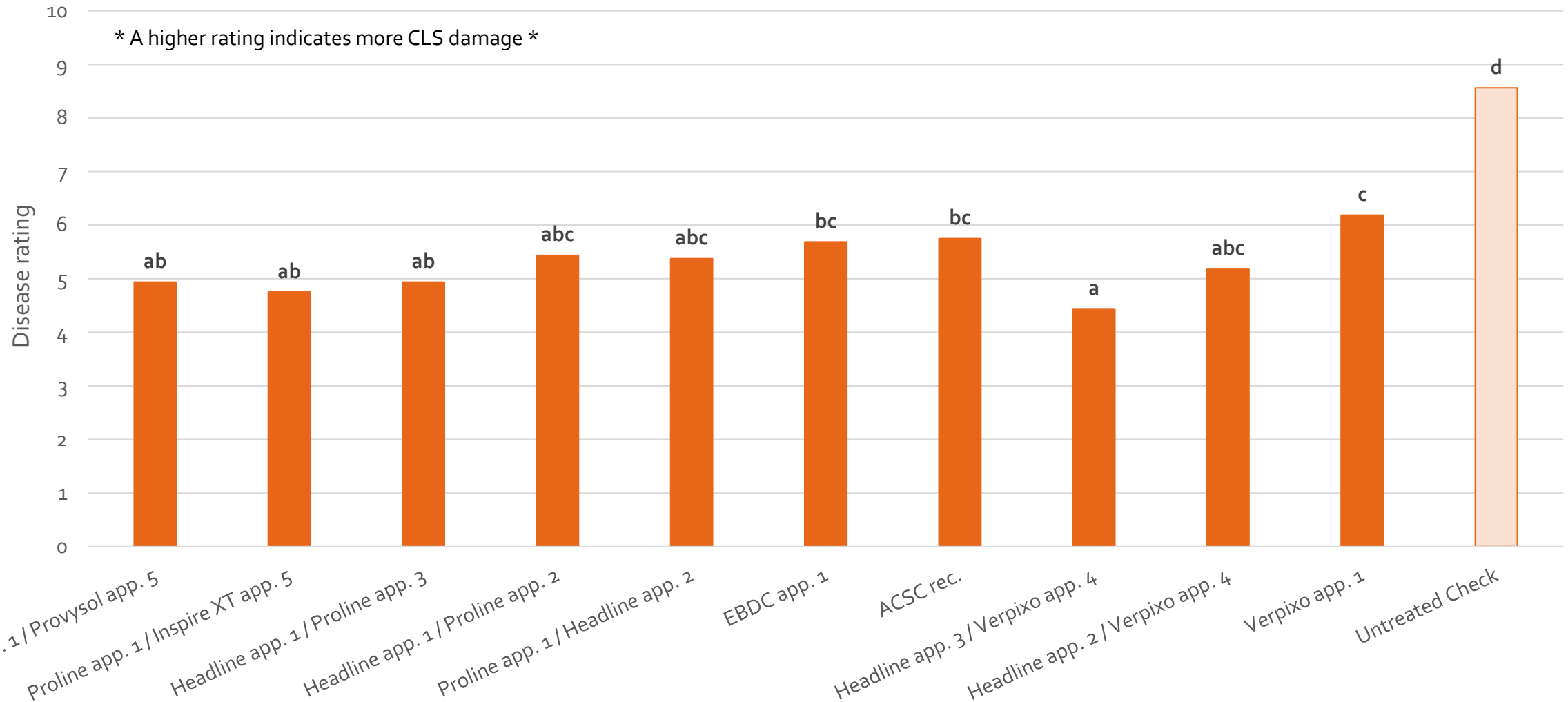
\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 1.18  
CV: 17.71



## CLS Rating – August 11, 2025



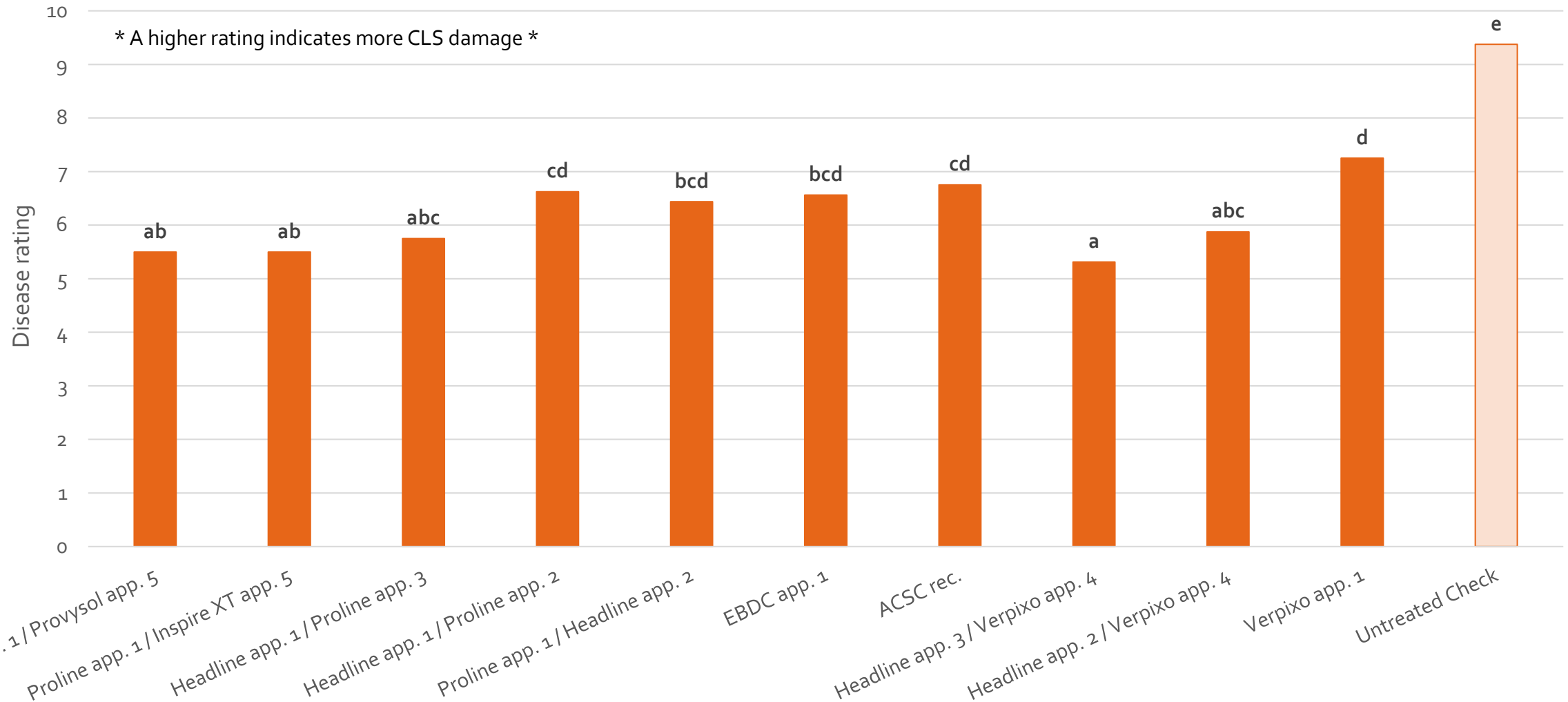
\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 1.08  
CV: 13.99



## CLS Rating – August 14, 2025



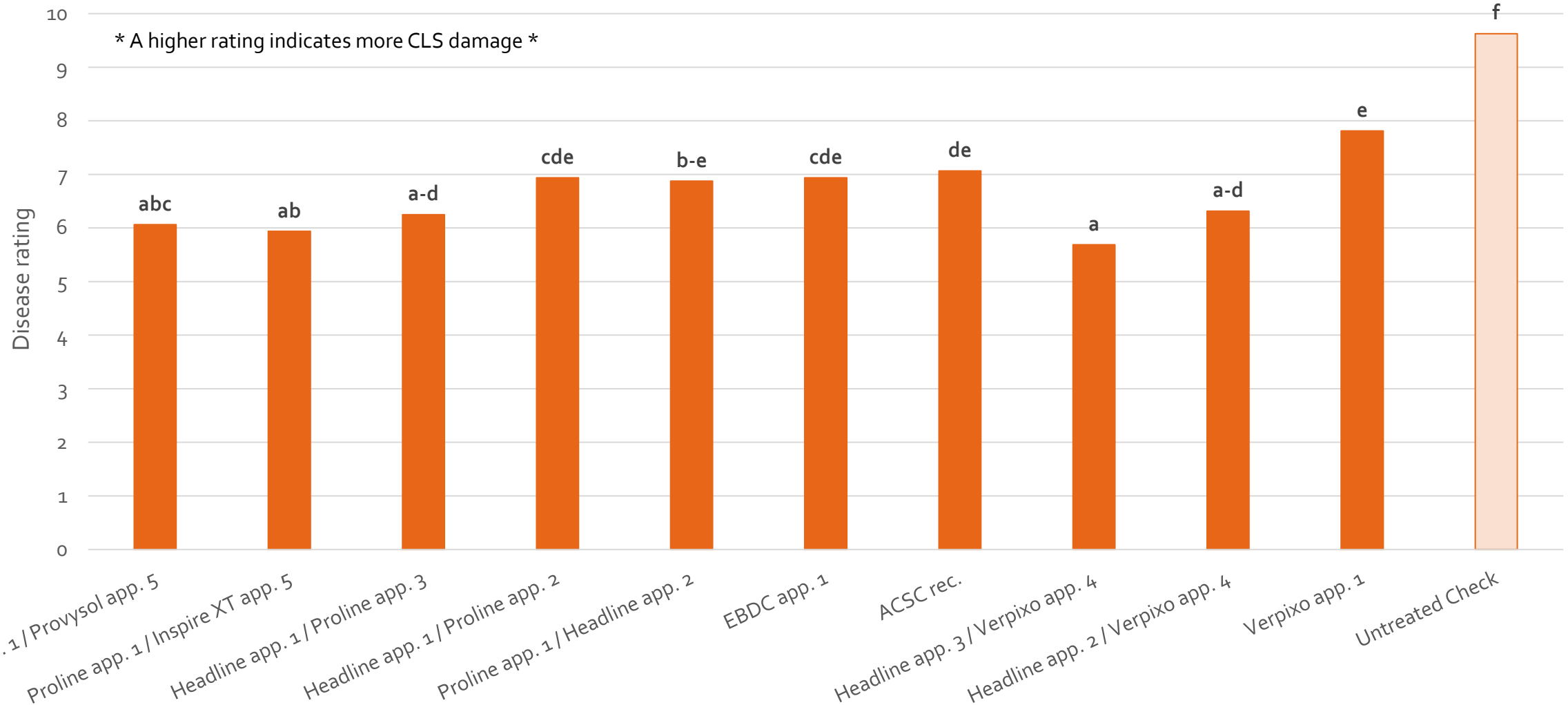
\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 0.98  
CV: 11.88



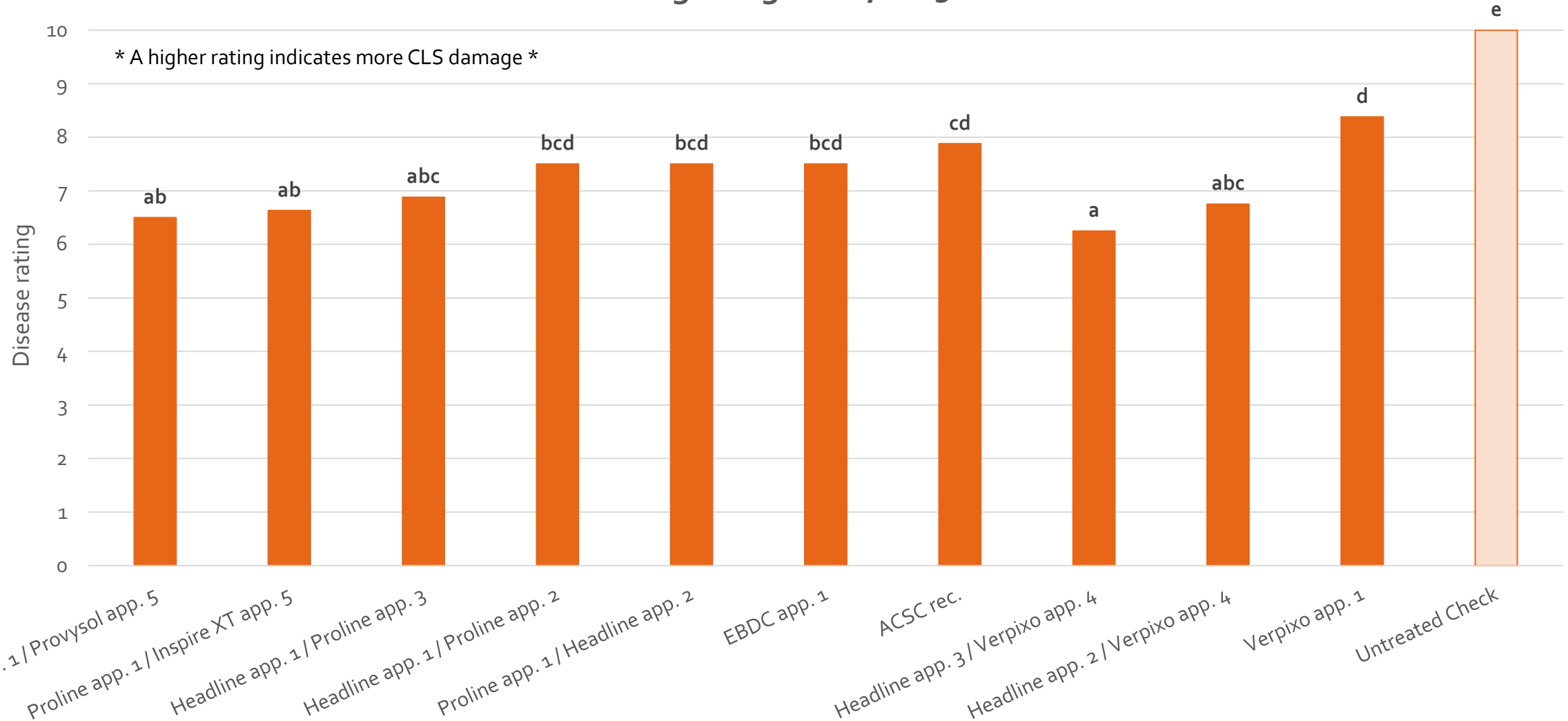
## CLS Rating – August 18, 2025



\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

## CLS Rating – August 21, 2025

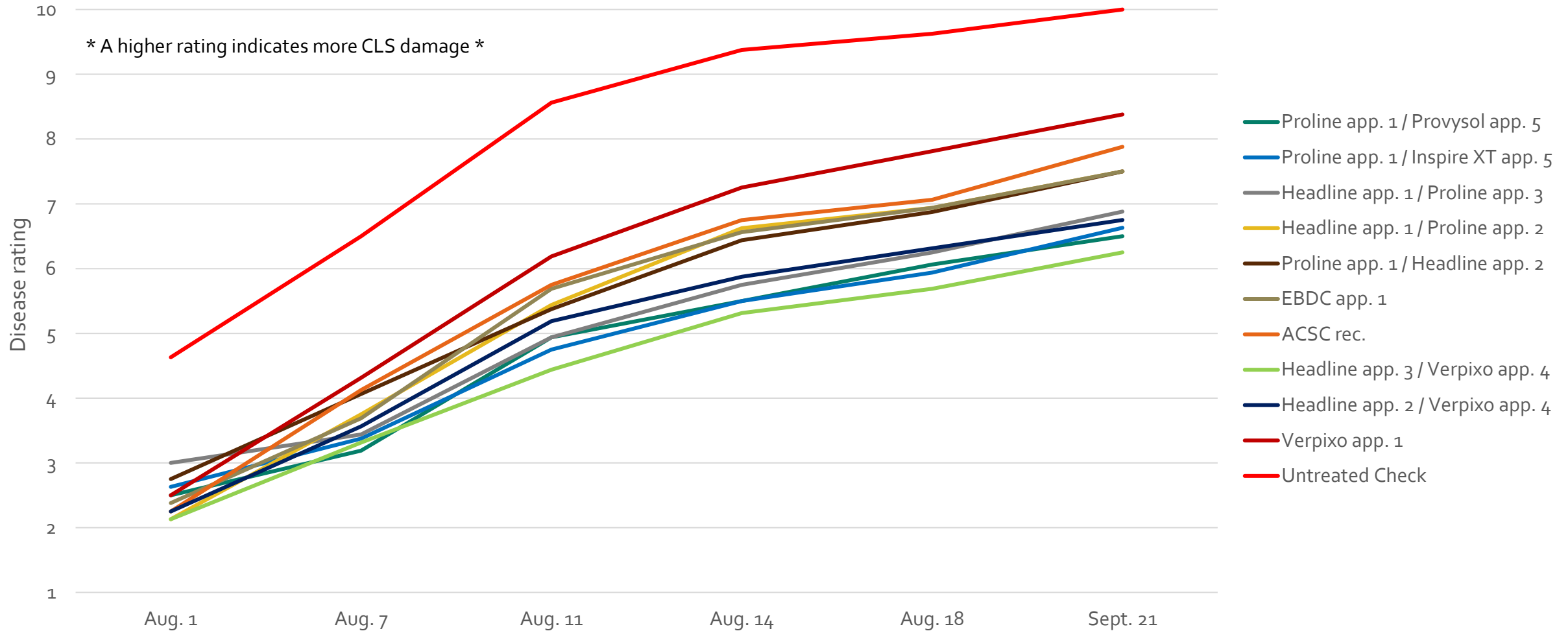


\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order



## CLS Rating – Season-long

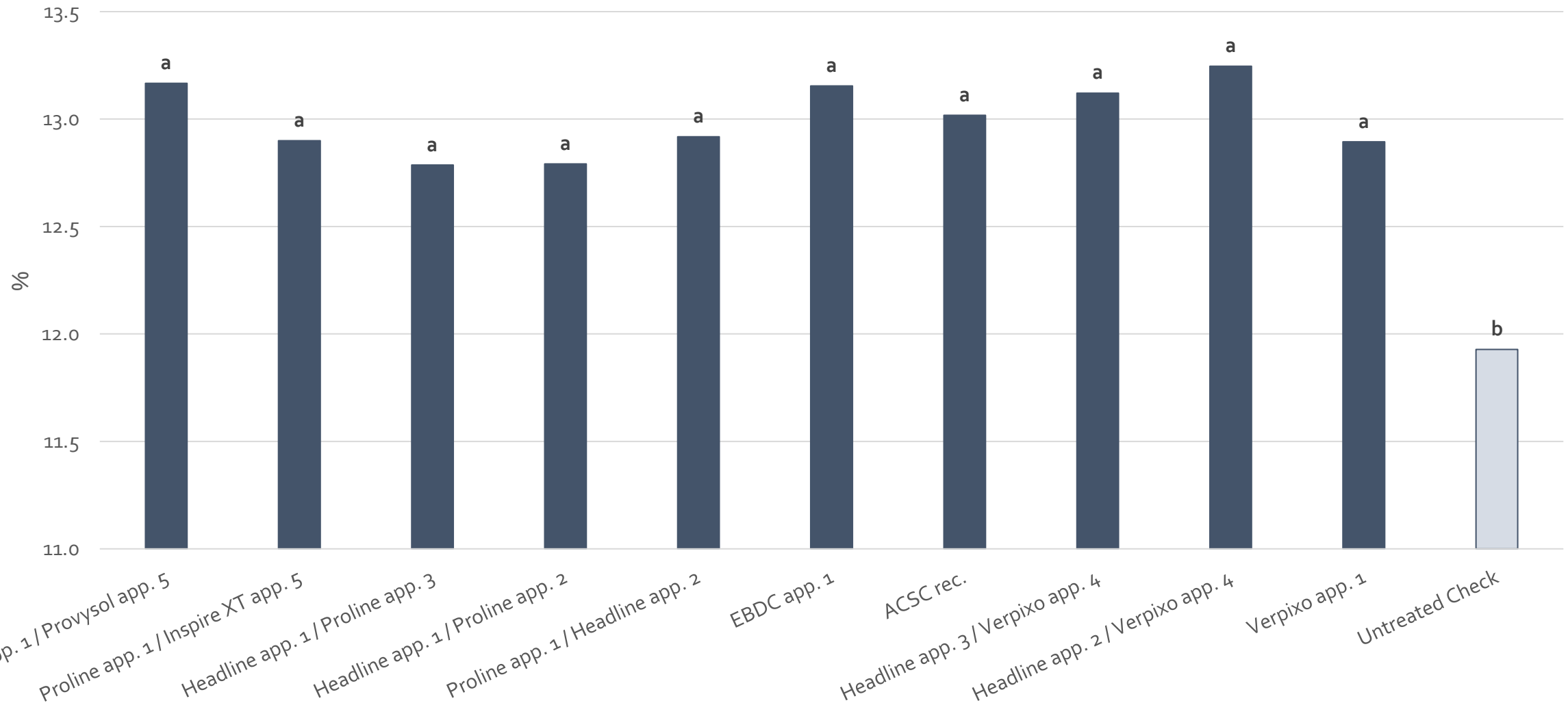


# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 0.61  
CV: 3.94



% Sugar



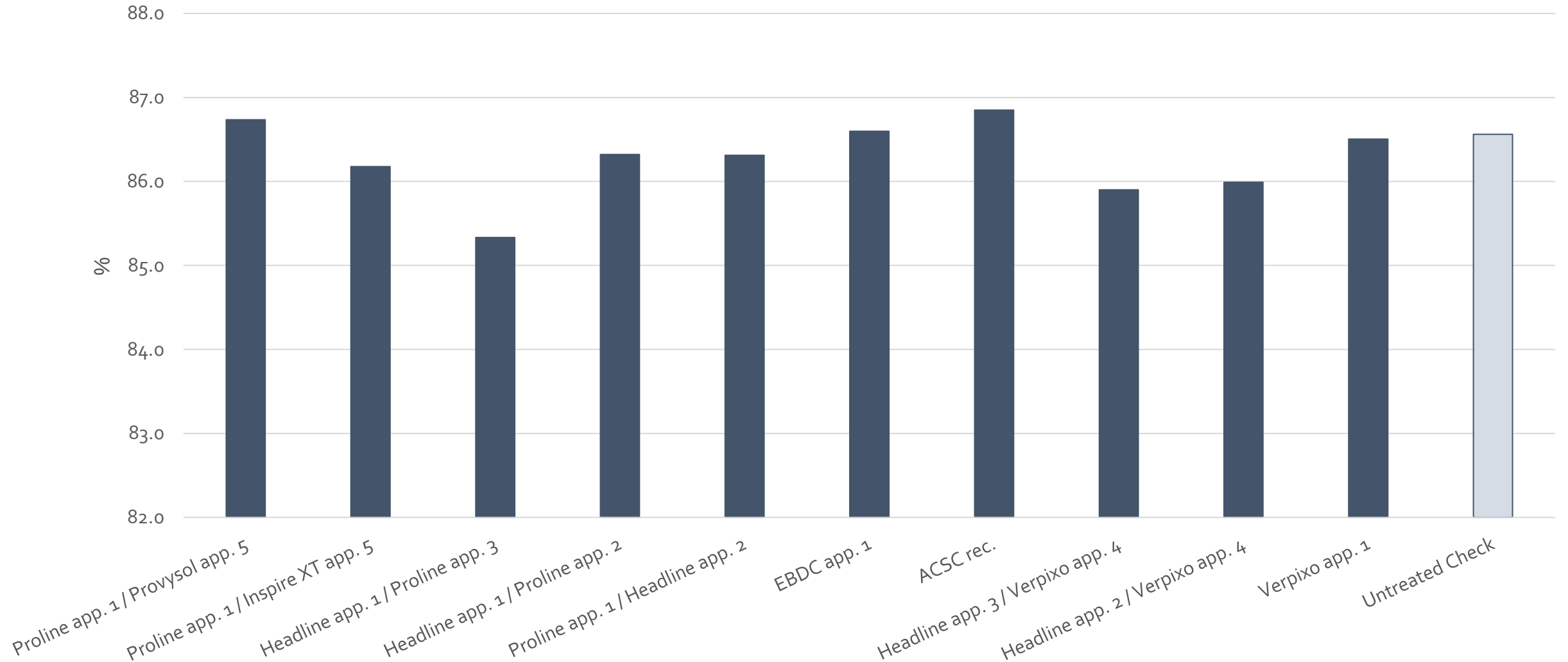
\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): NS  
CV: 1.21



% Purity

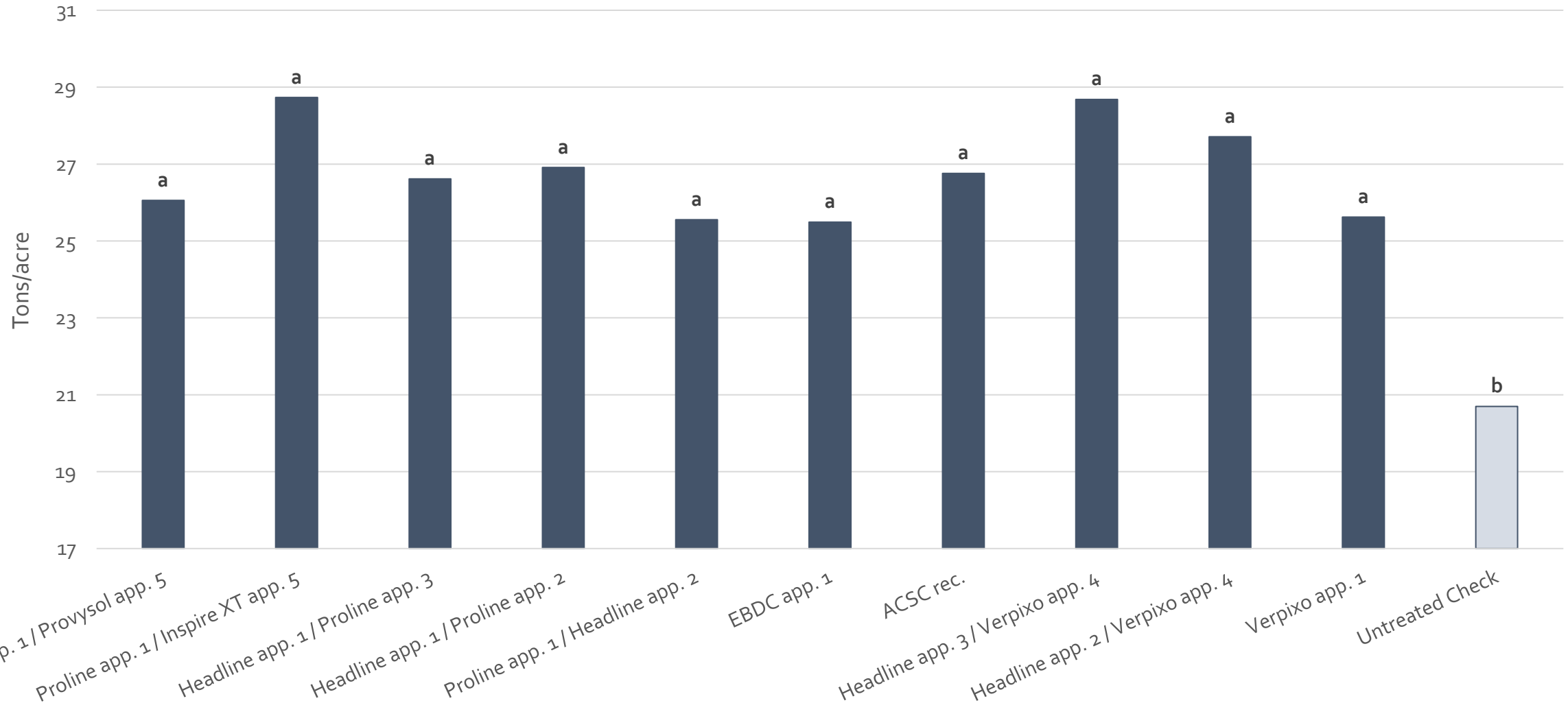


# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 3.26  
CV: 10.36



## Root Yield



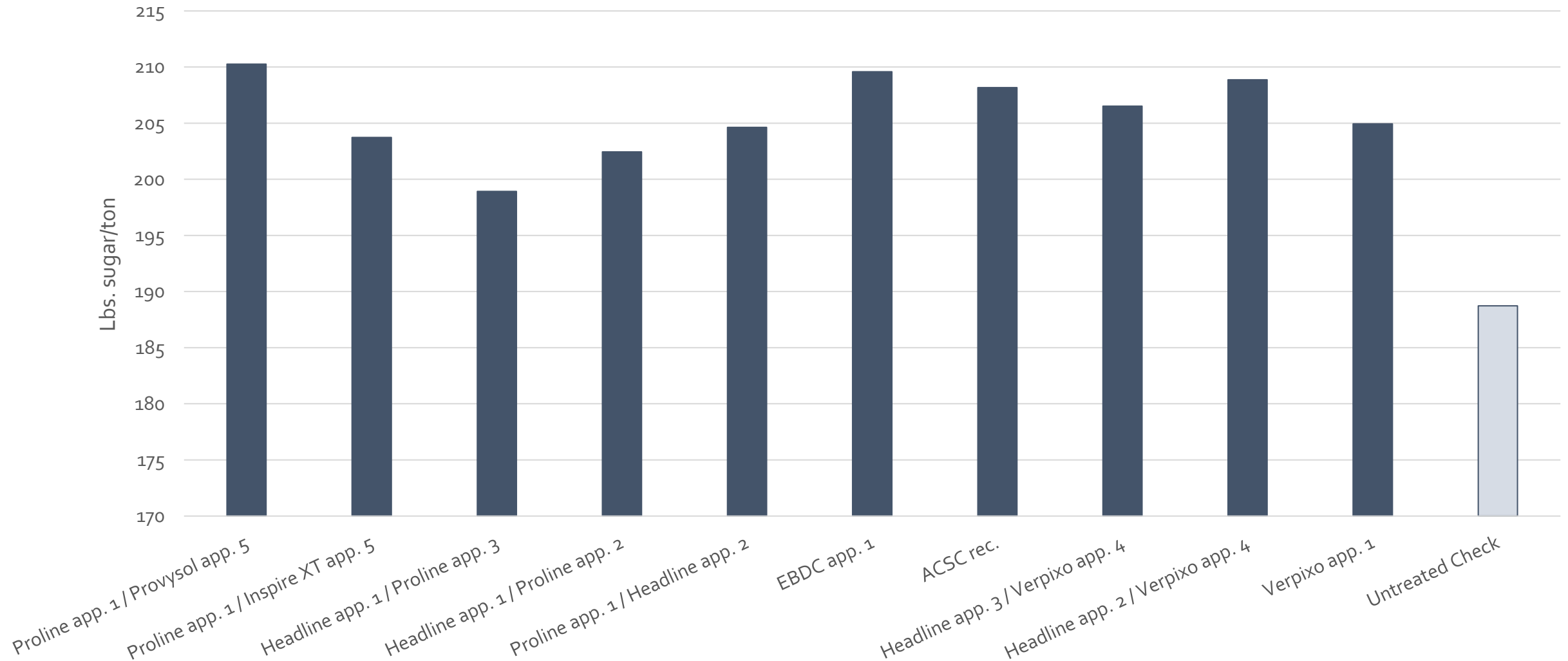
\*Treatments with the same letter are not statistically different\*

# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): NS  
CV: 5.29



## Recoverable Sugar per Ton

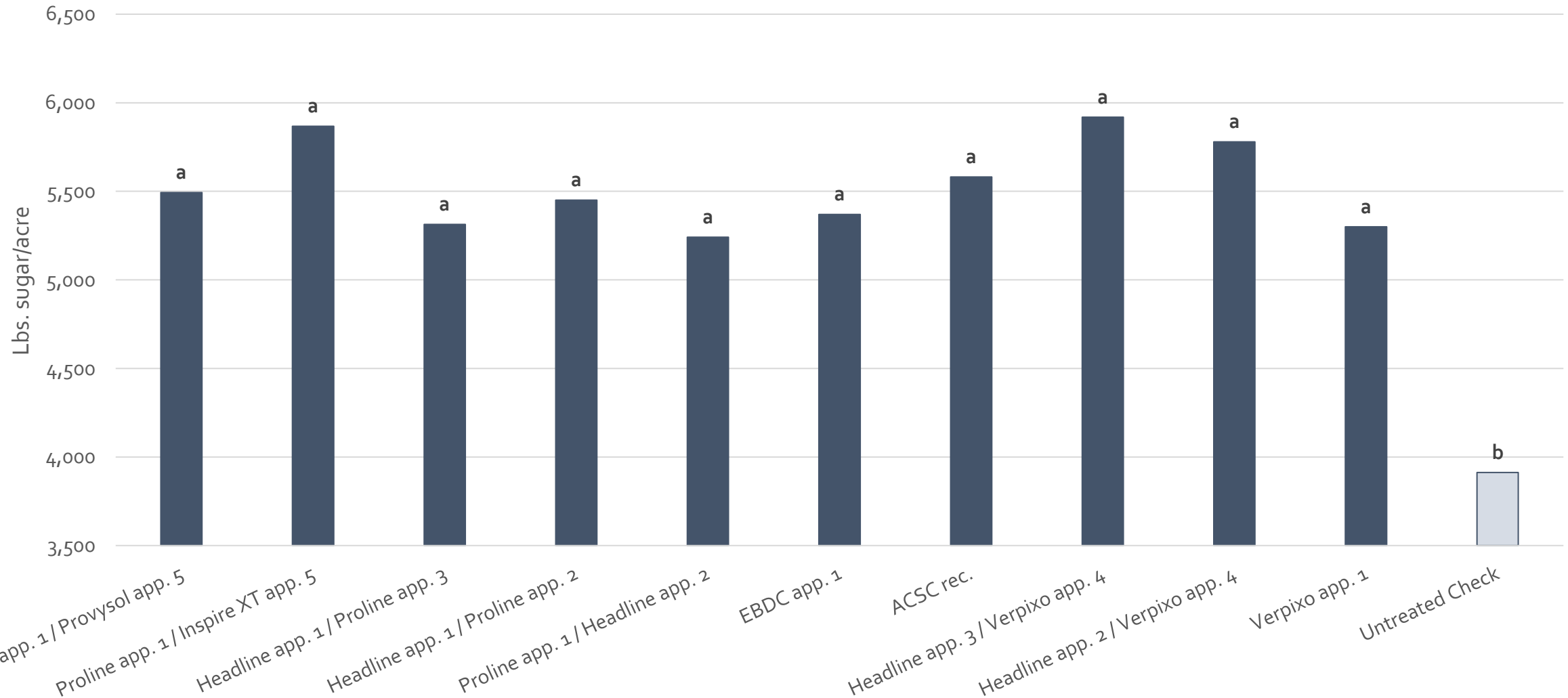


# CR+: CLS Fungicide Program ~ Order

LSD (p=0.10): 921.70  
CV: 14.26



## Recoverable Sugar per Acre



\*Treatments with the same letter are not statistically different\*