

Sugarcane Ripener Research

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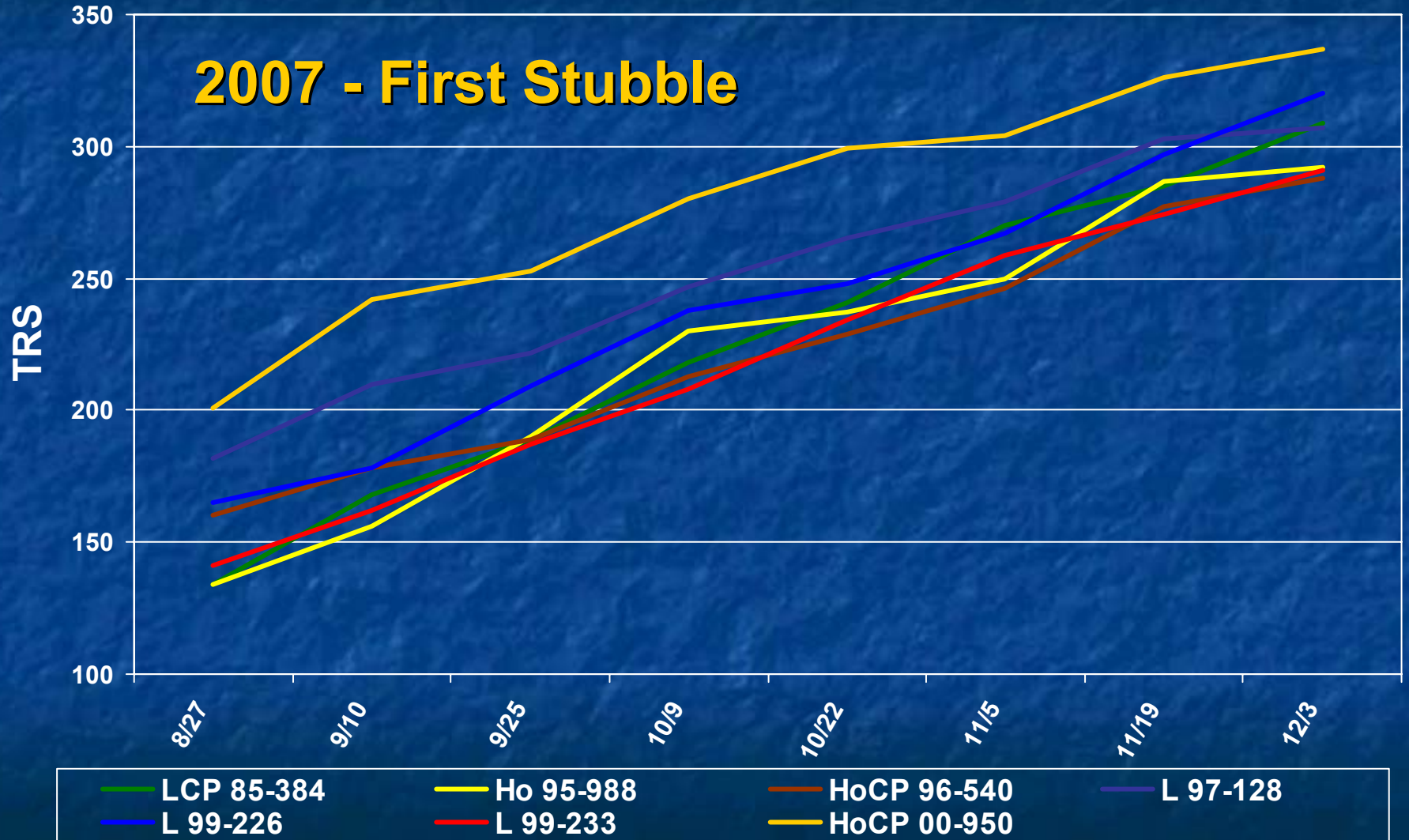
USDA-ARS

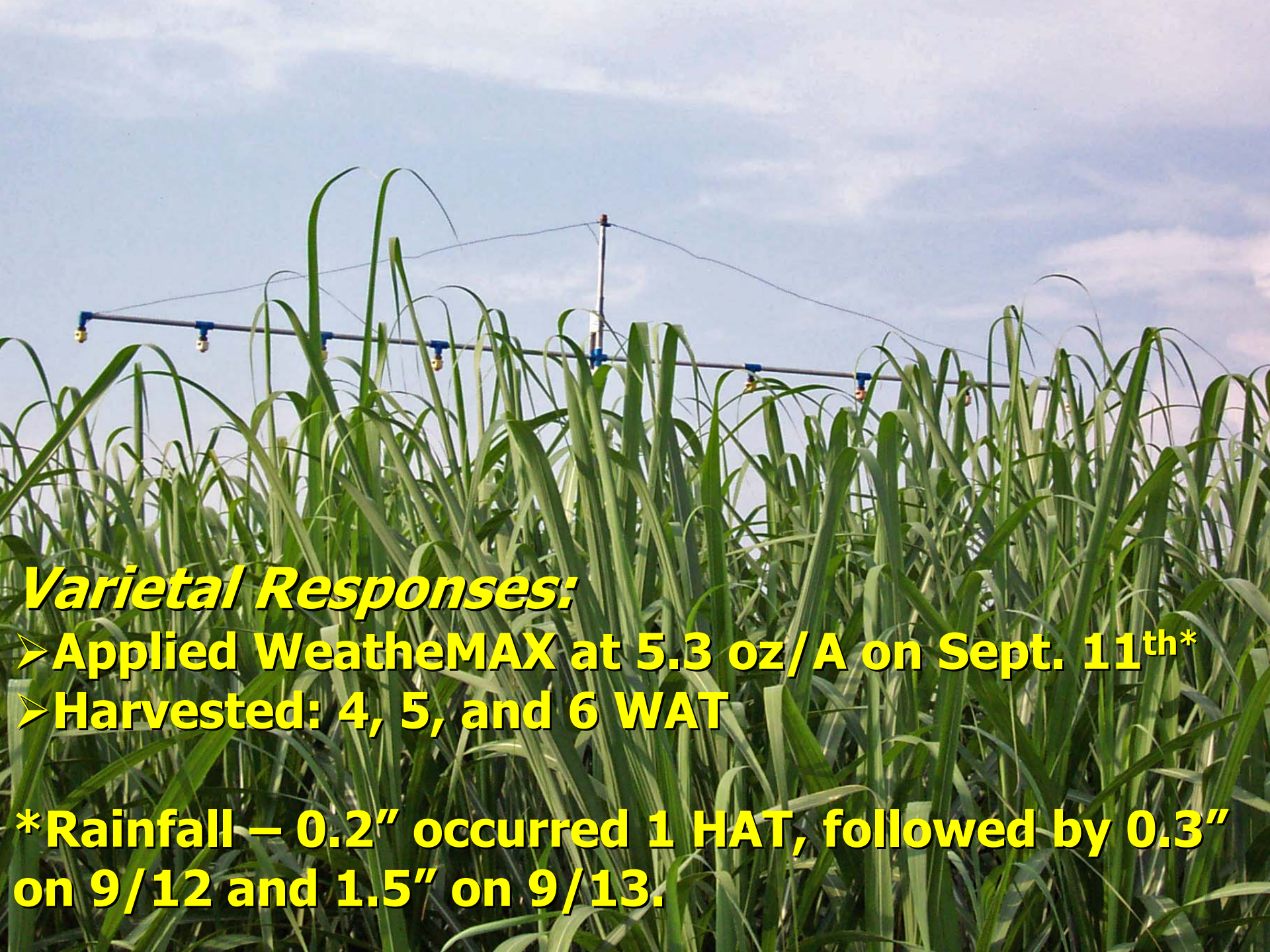
Sugarcane Research Laboratory

Houma, LA



MATURITY STUDIES





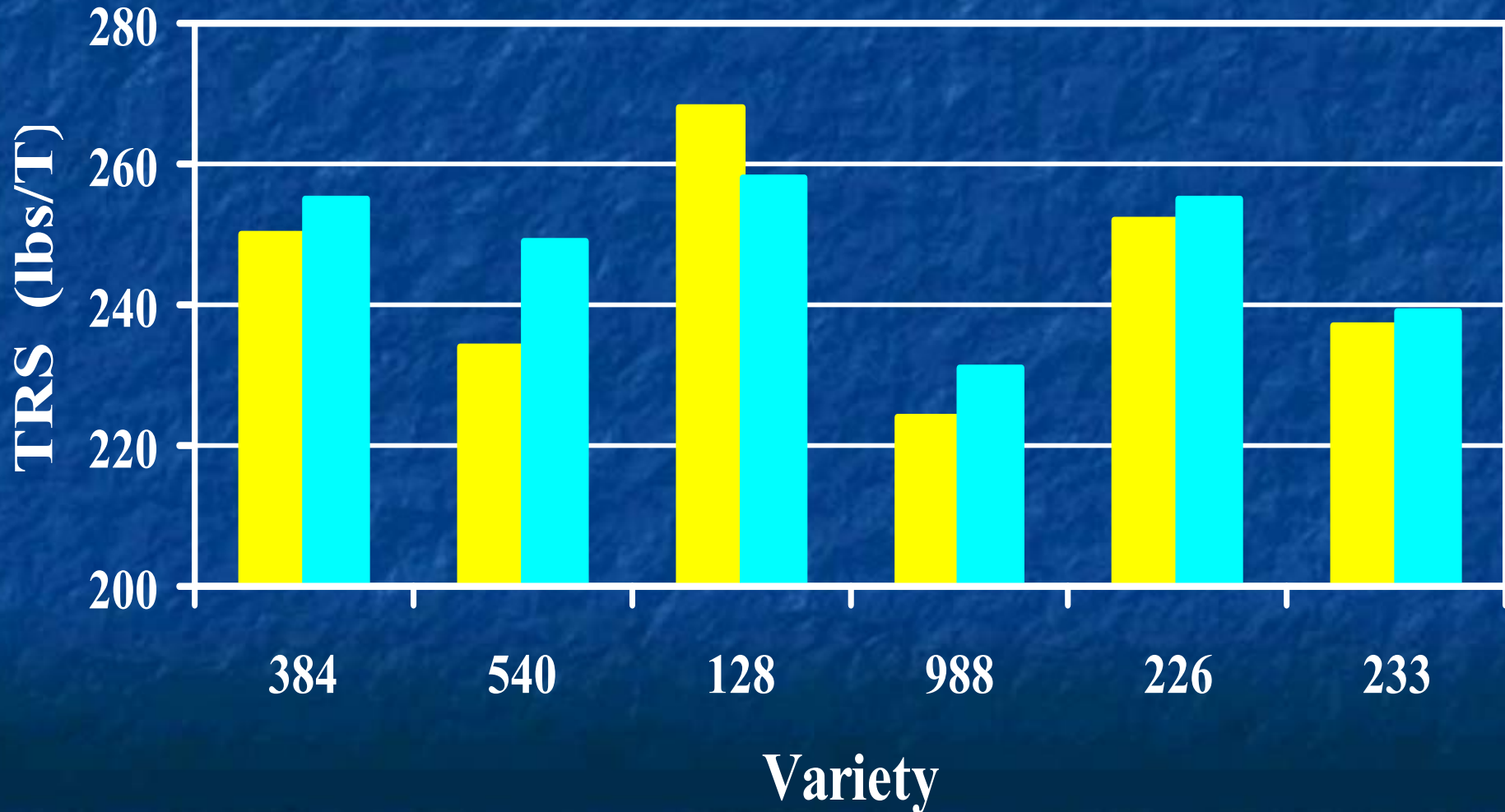
Varietal Responses:

- **Applied WeatheMAX at 5.3 oz/A on Sept. 11th***
- **Harvested: 4, 5, and 6 WAT**

***Rainfall – 0.2" occurred 1 HAT, followed by 0.3" on 9/12 and 1.5" on 9/13.**

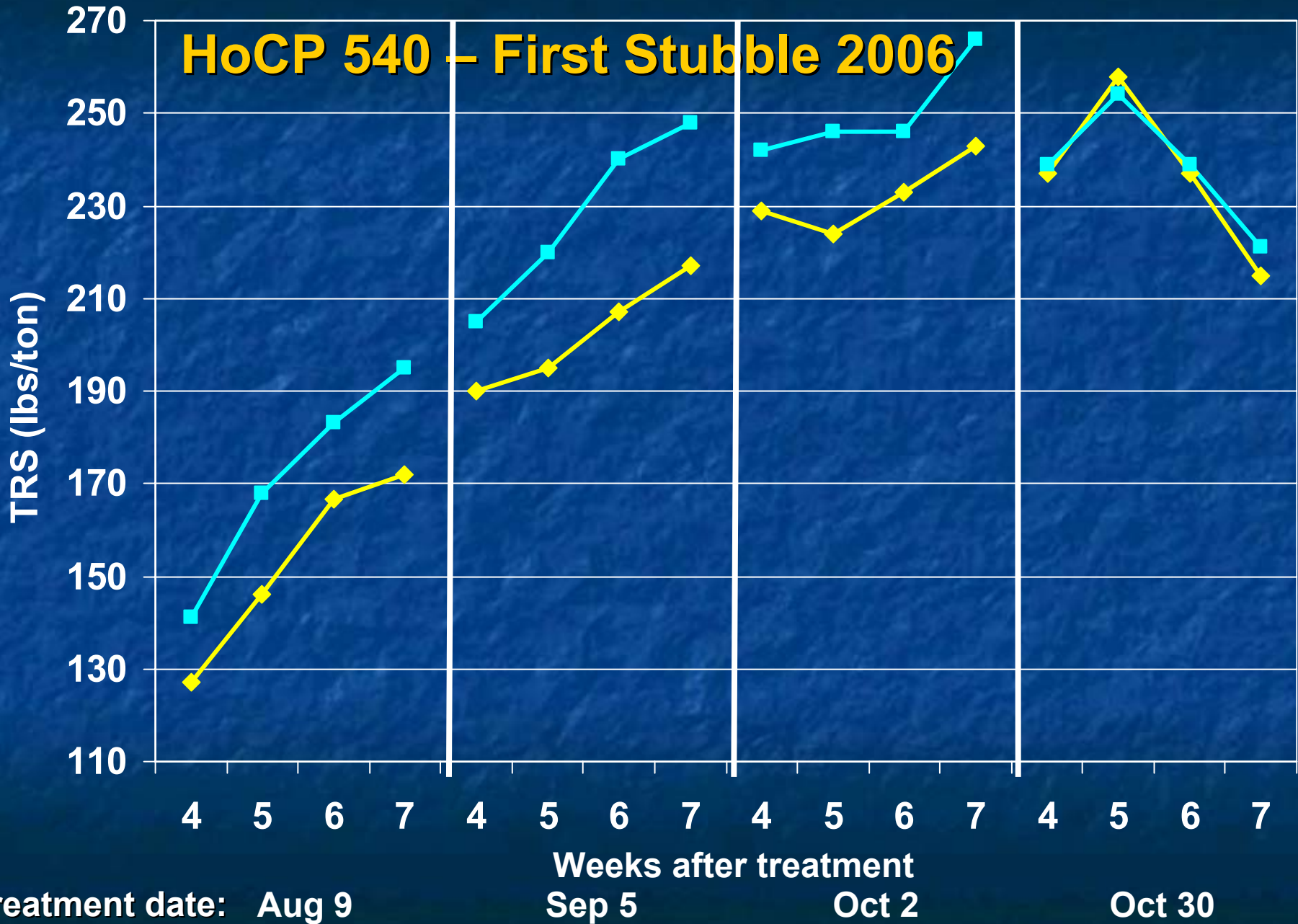
6 WAT Response

■ Control ■ Treated



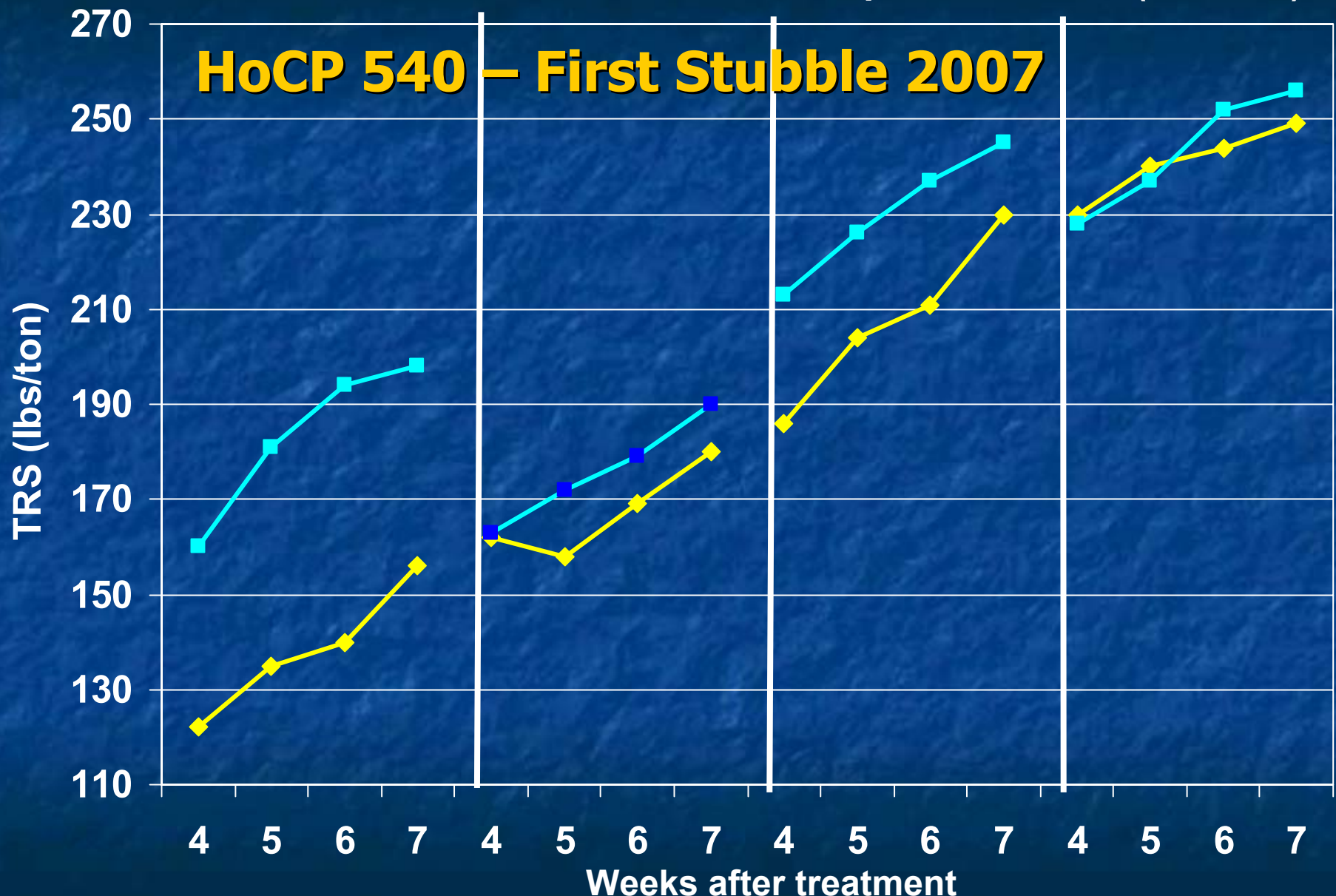
◆ Control ■ Roundup WeatherMax (5.3 oz/A)

HoCP 540 – First Stubble 2006



HoCP 540 – First Stubble 2007

Control Roundup WeatherMax (5.3 oz/A)



Treatment date: Aug 10

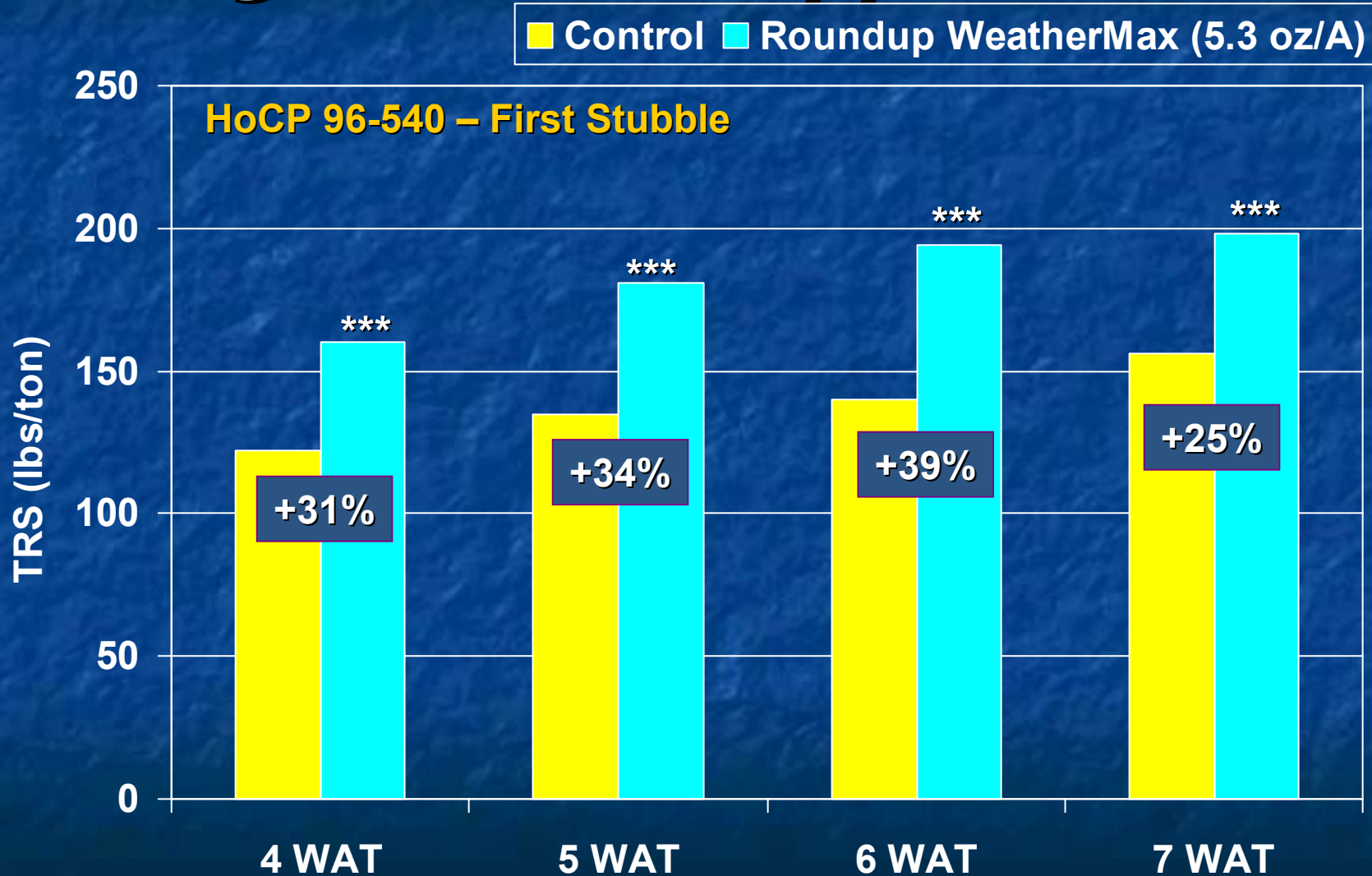
Sep 7

Oct 3

Nov 1

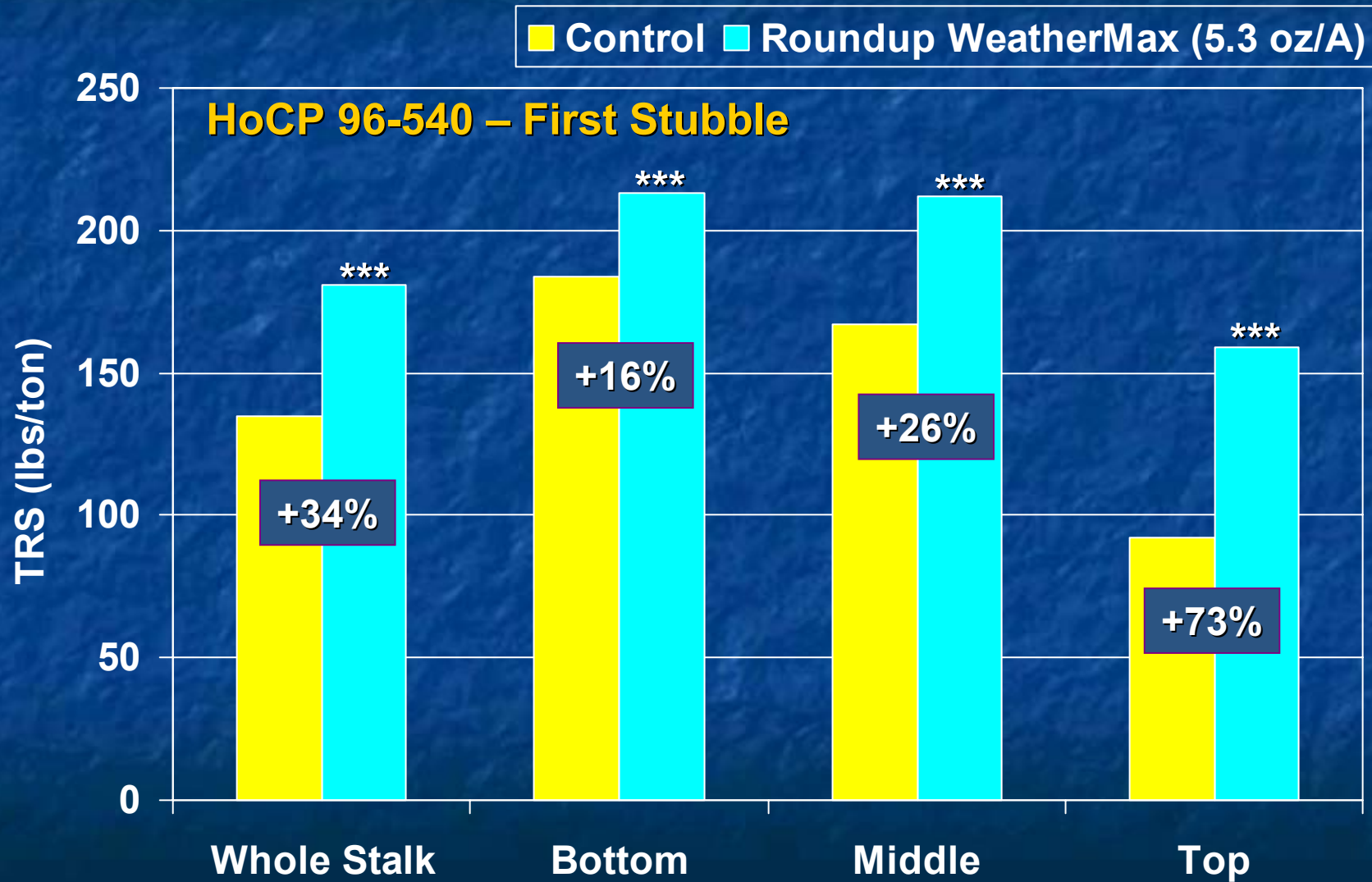
Sugarcane Response to Ripener

August 9-10th Application



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

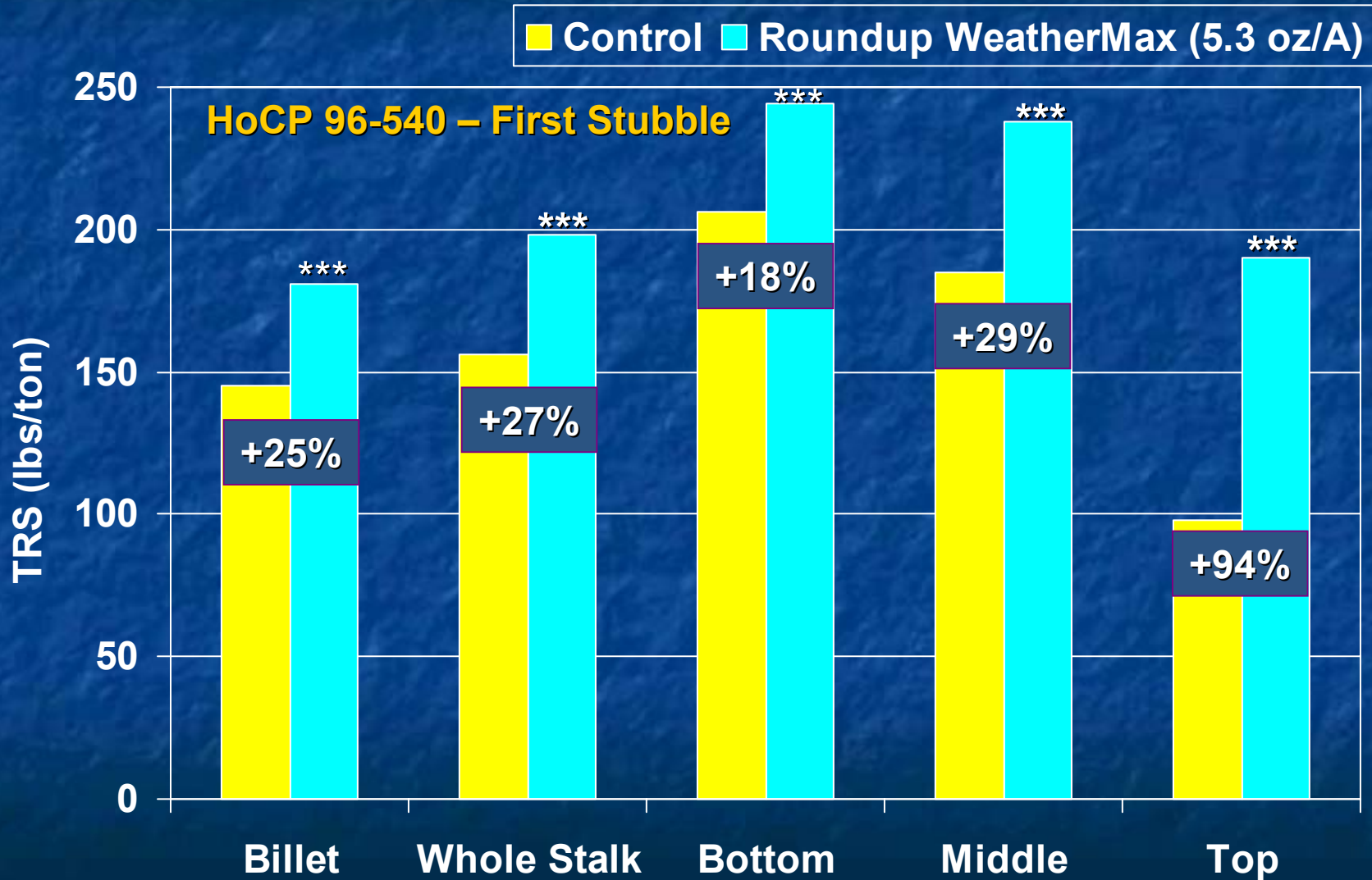
Sugarcane Response to Ripener August 9-10th Application (5 WAT)



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Sugarcane Response to Ripener

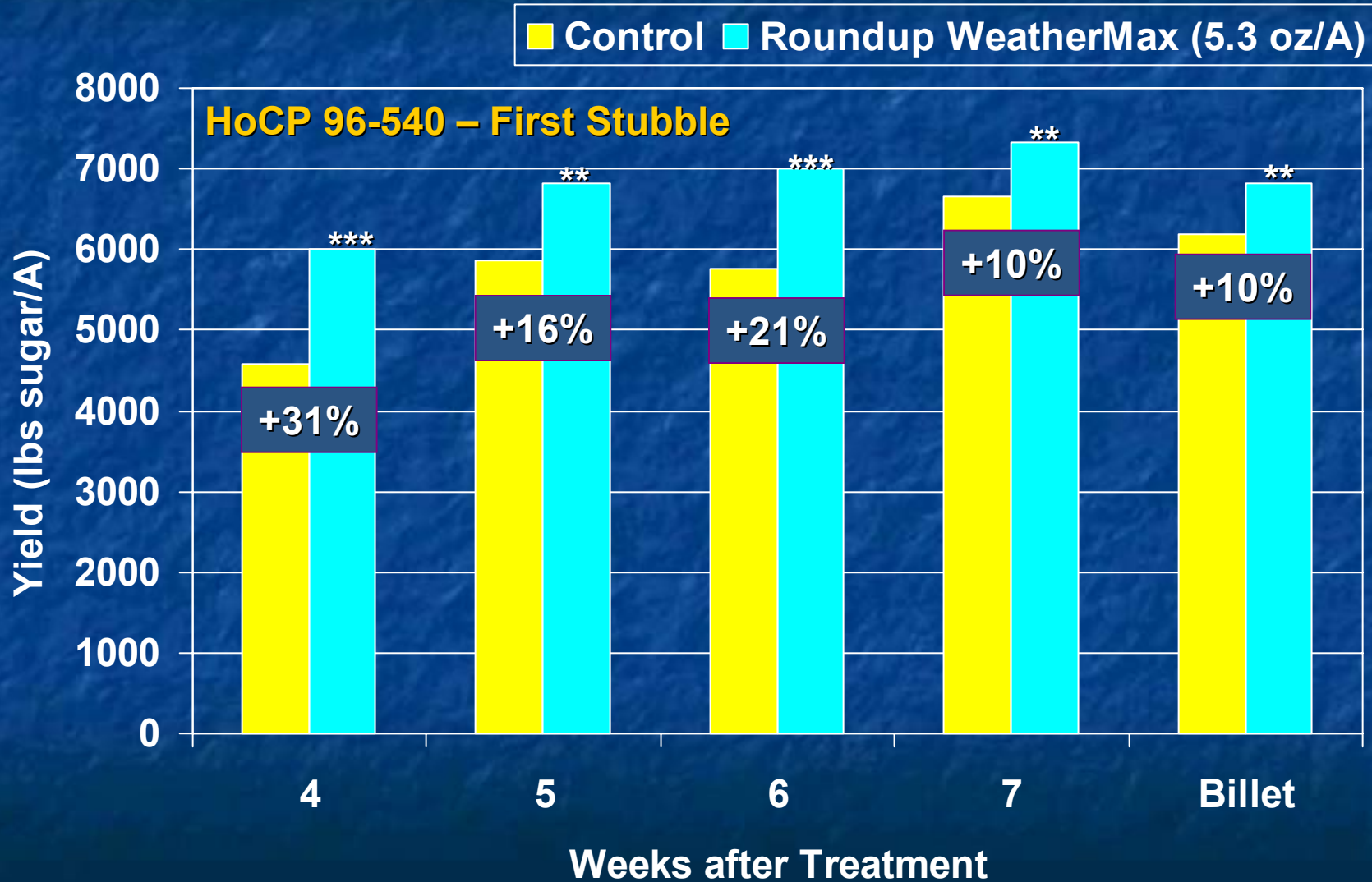
August 9-10th Application (7 WAT)



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

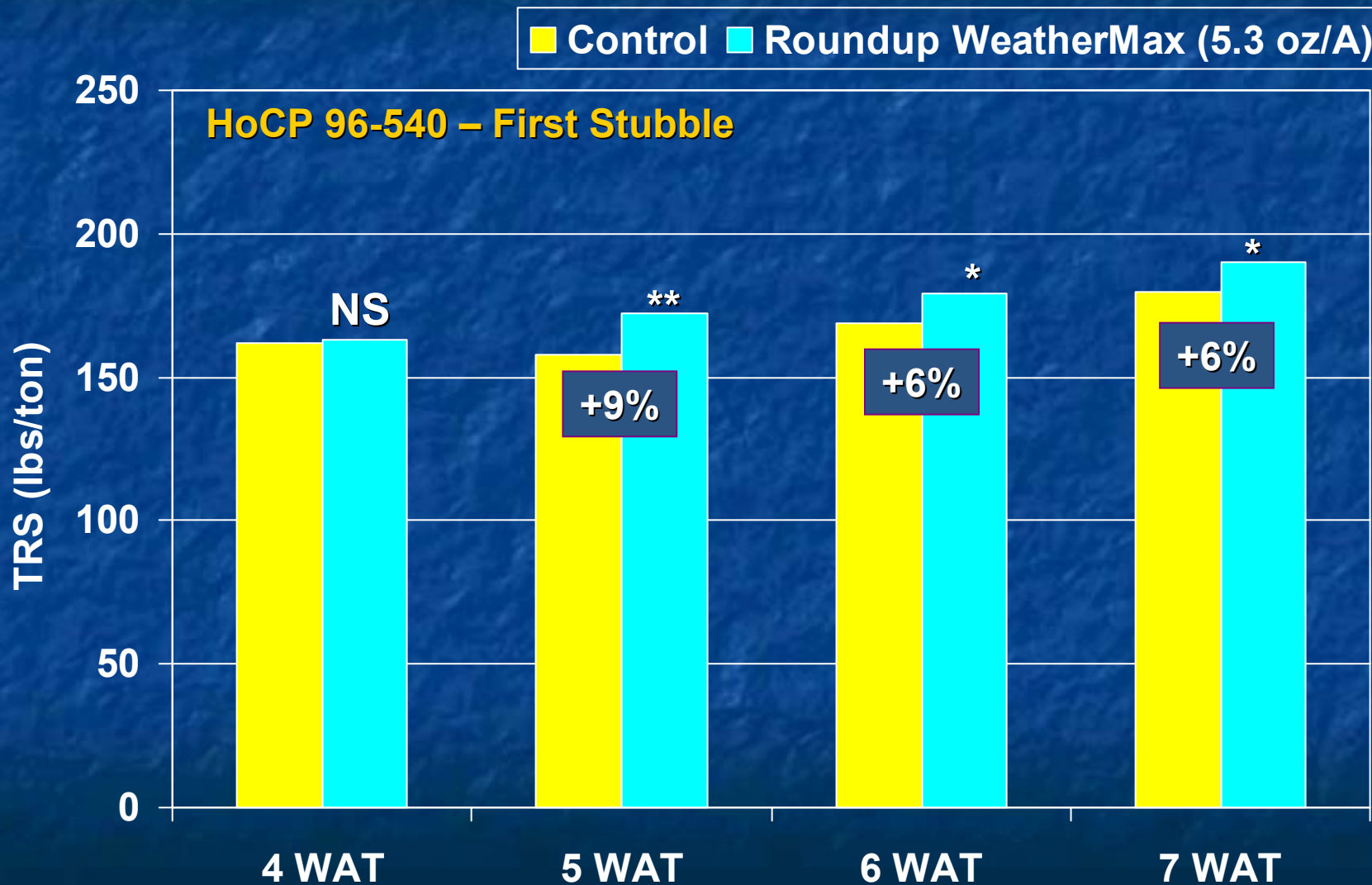
Sugarcane Response to Ripener

August 9-10th Estimated Yield



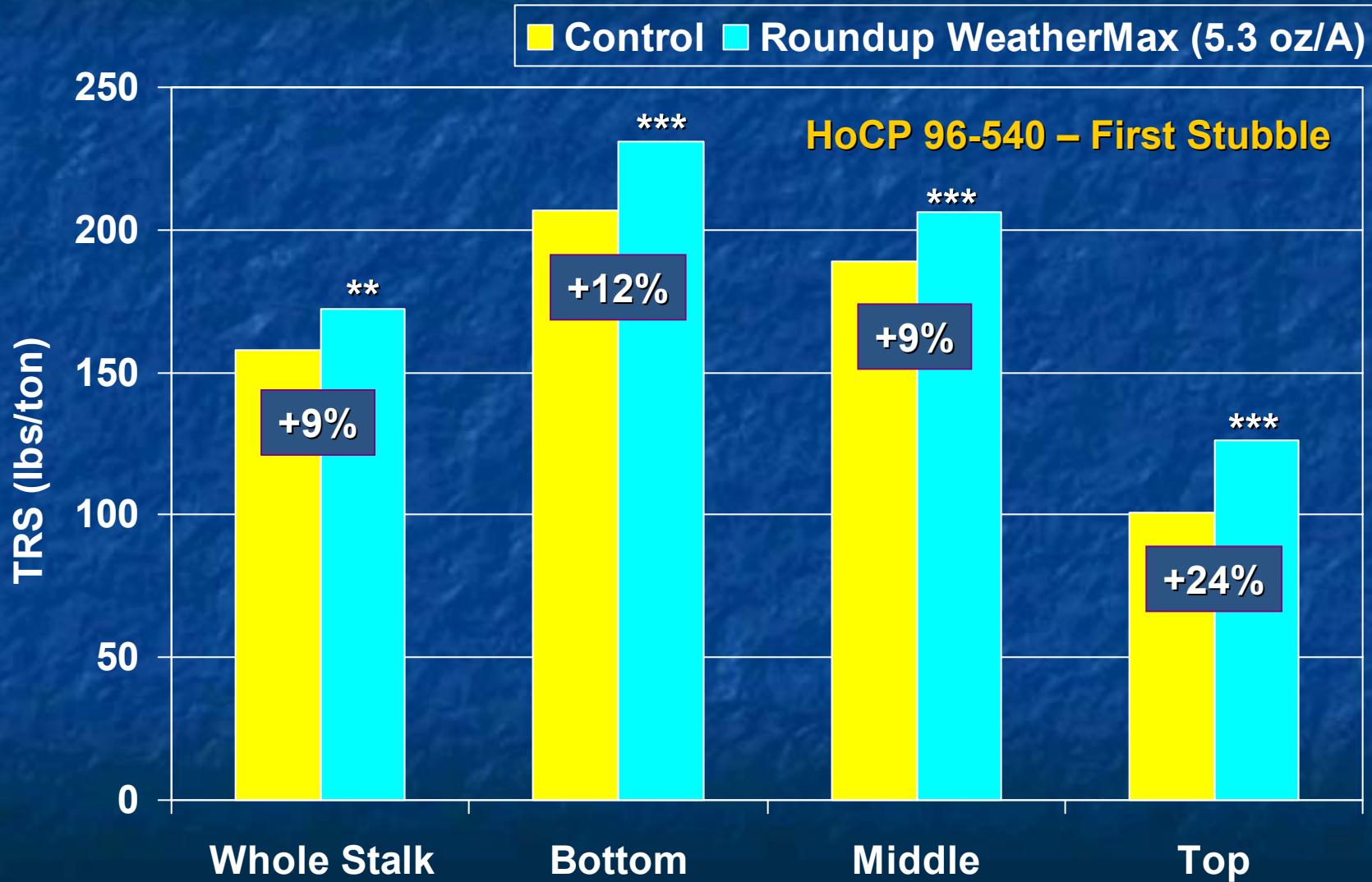
* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Sugarcane Response to Ripener September 5-7th Application



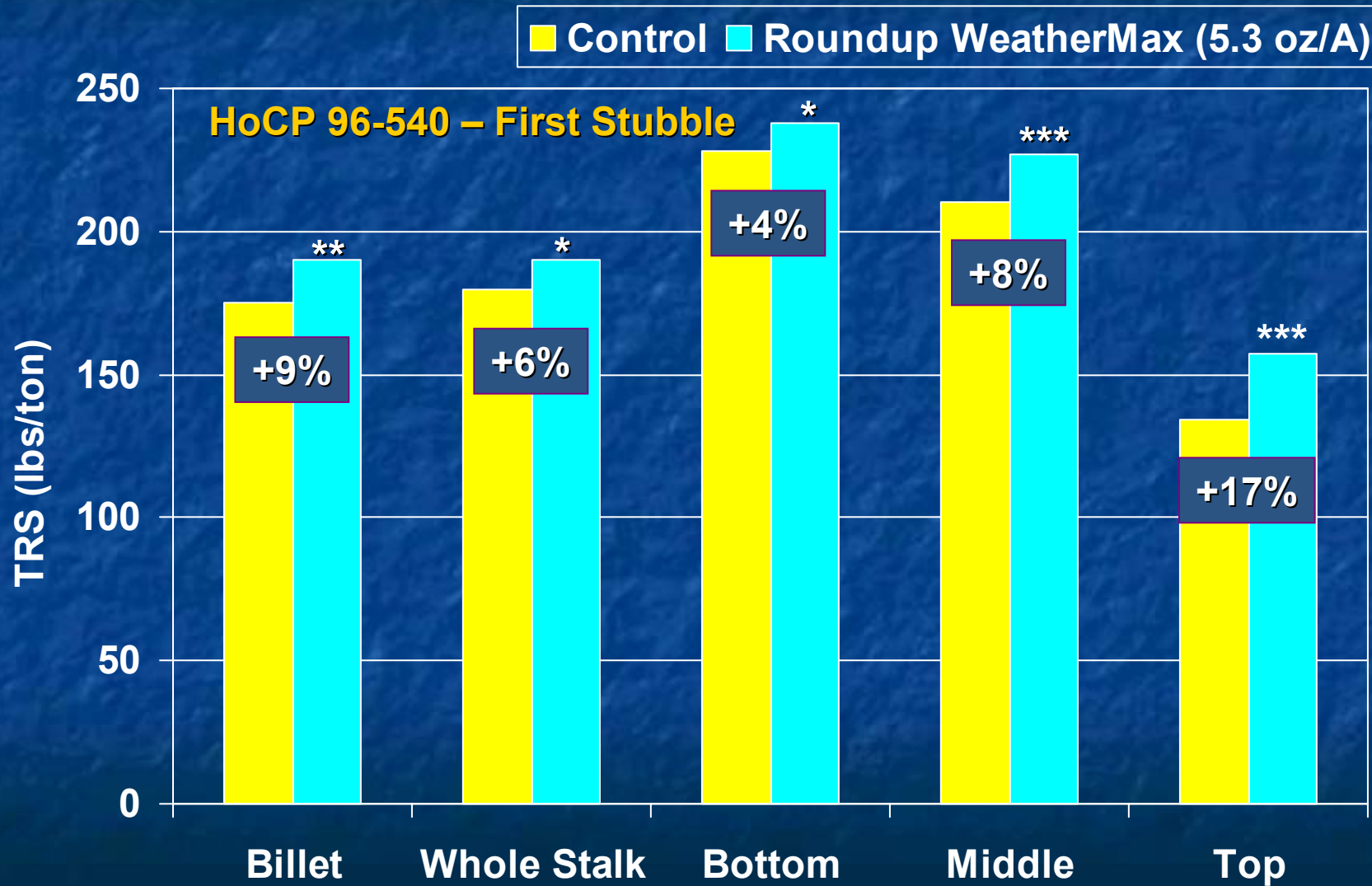
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Sugarcane Response to Ripener September 5-7th Application (5 WAT)



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

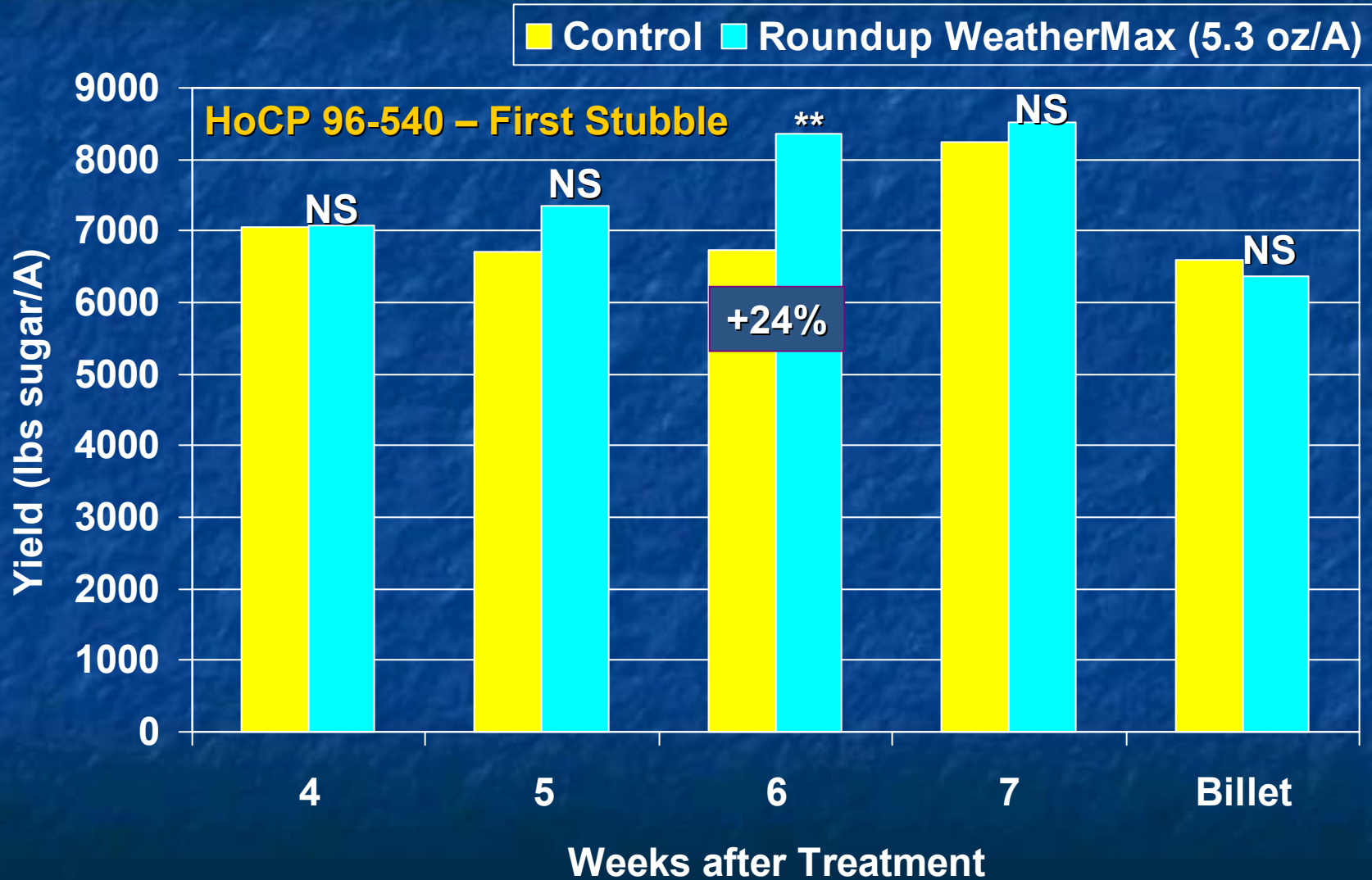
Sugarcane Response to Ripener September 5-7th Application (7 WAT)



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

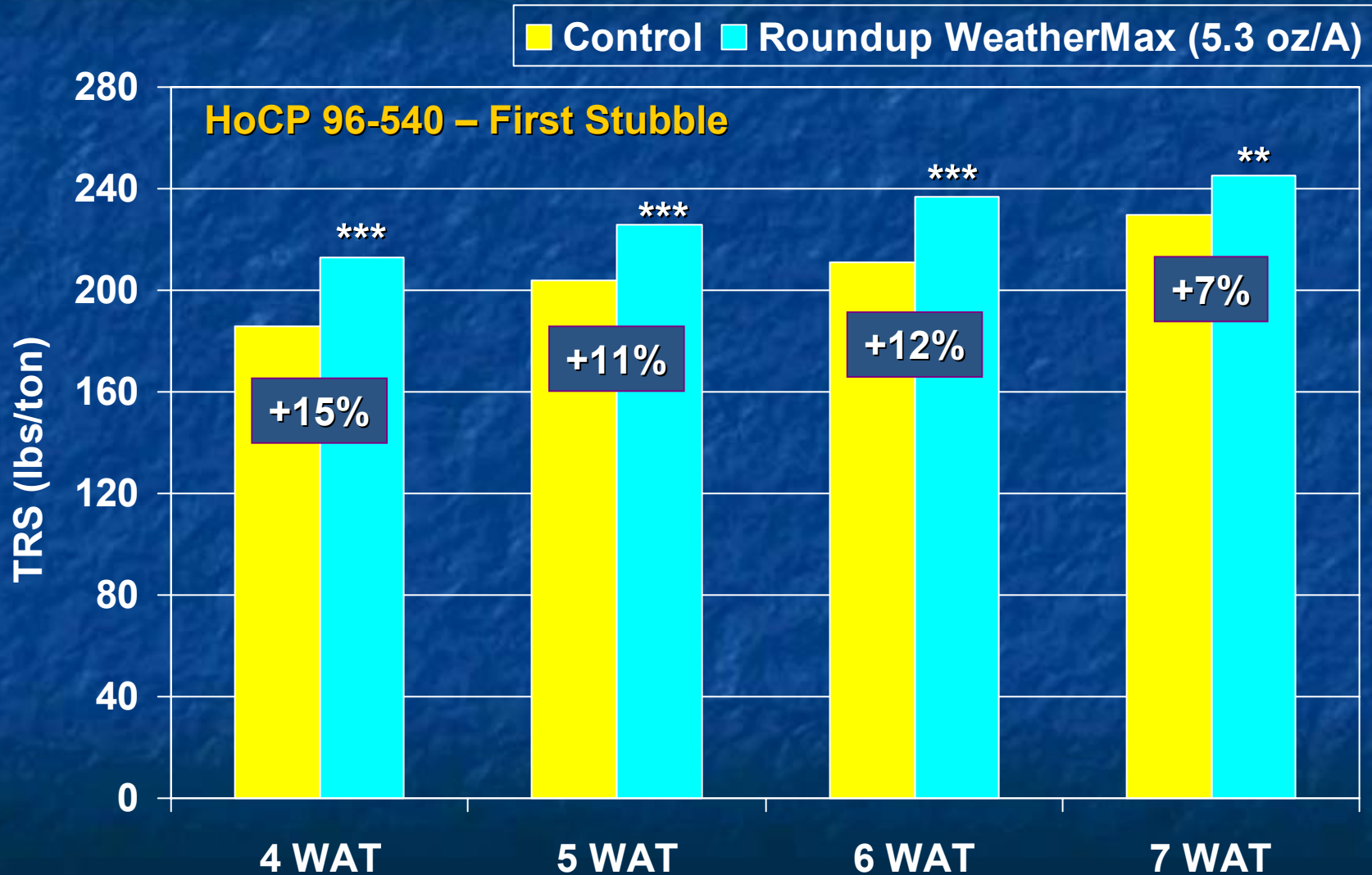
Sugarcane Response to Ripener

September 5-7th Estimated Yield



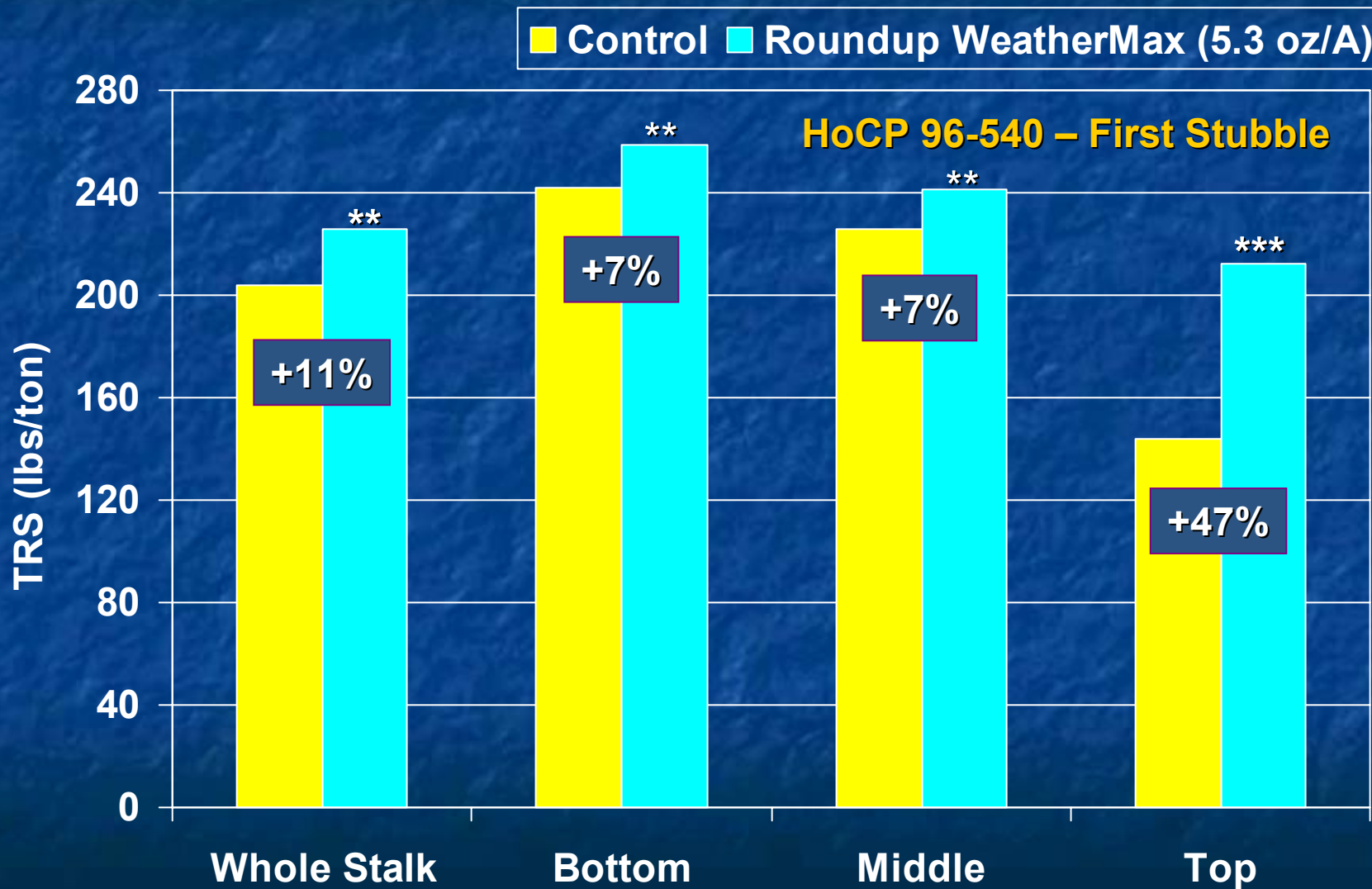
* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Sugarcane Response to Ripener October 2nd-3rd Application



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

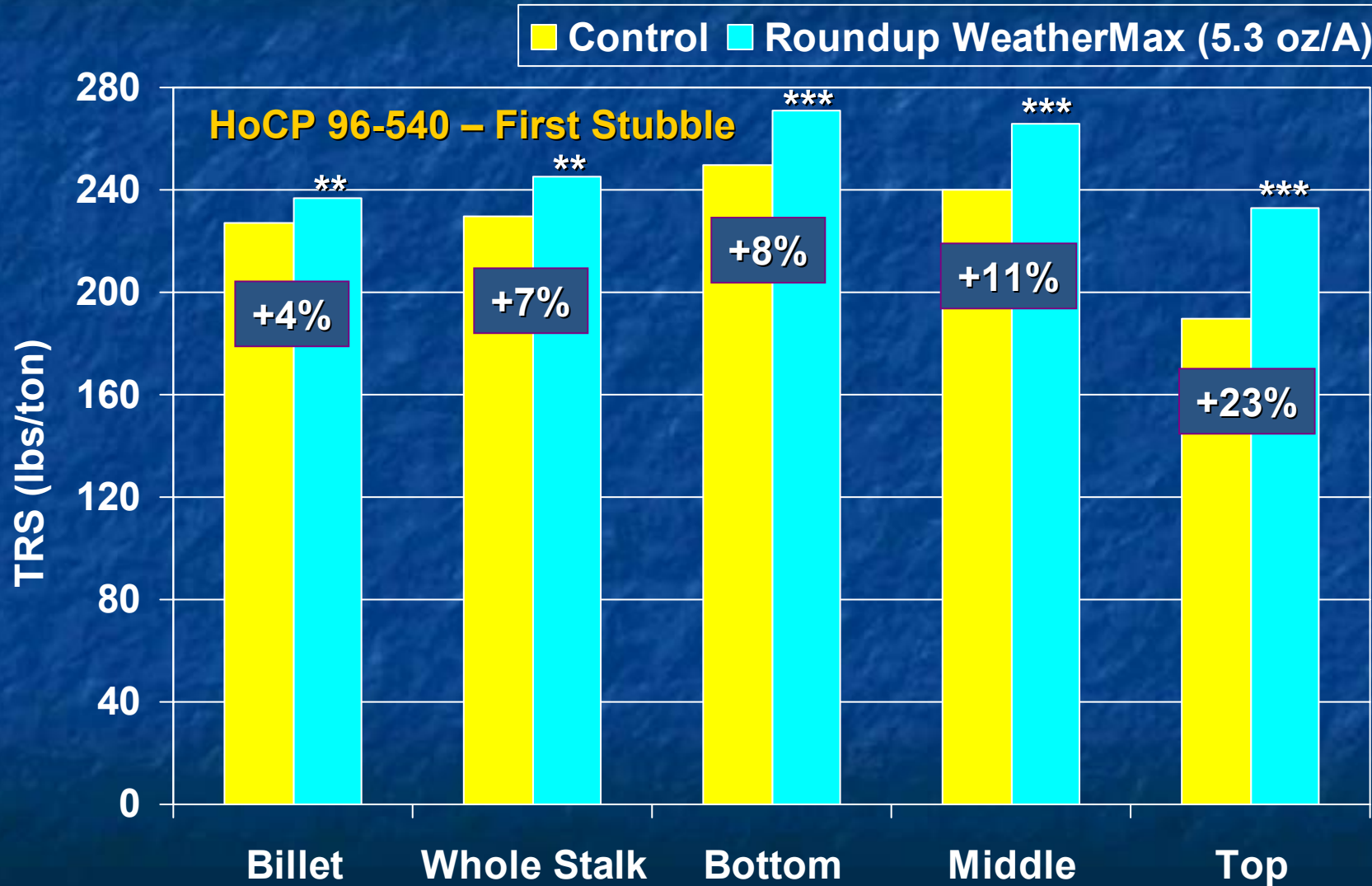
Sugarcane Response to Ripener *October 2nd – 3rd Application (5WAT)*



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Sugarcane Response to Ripener

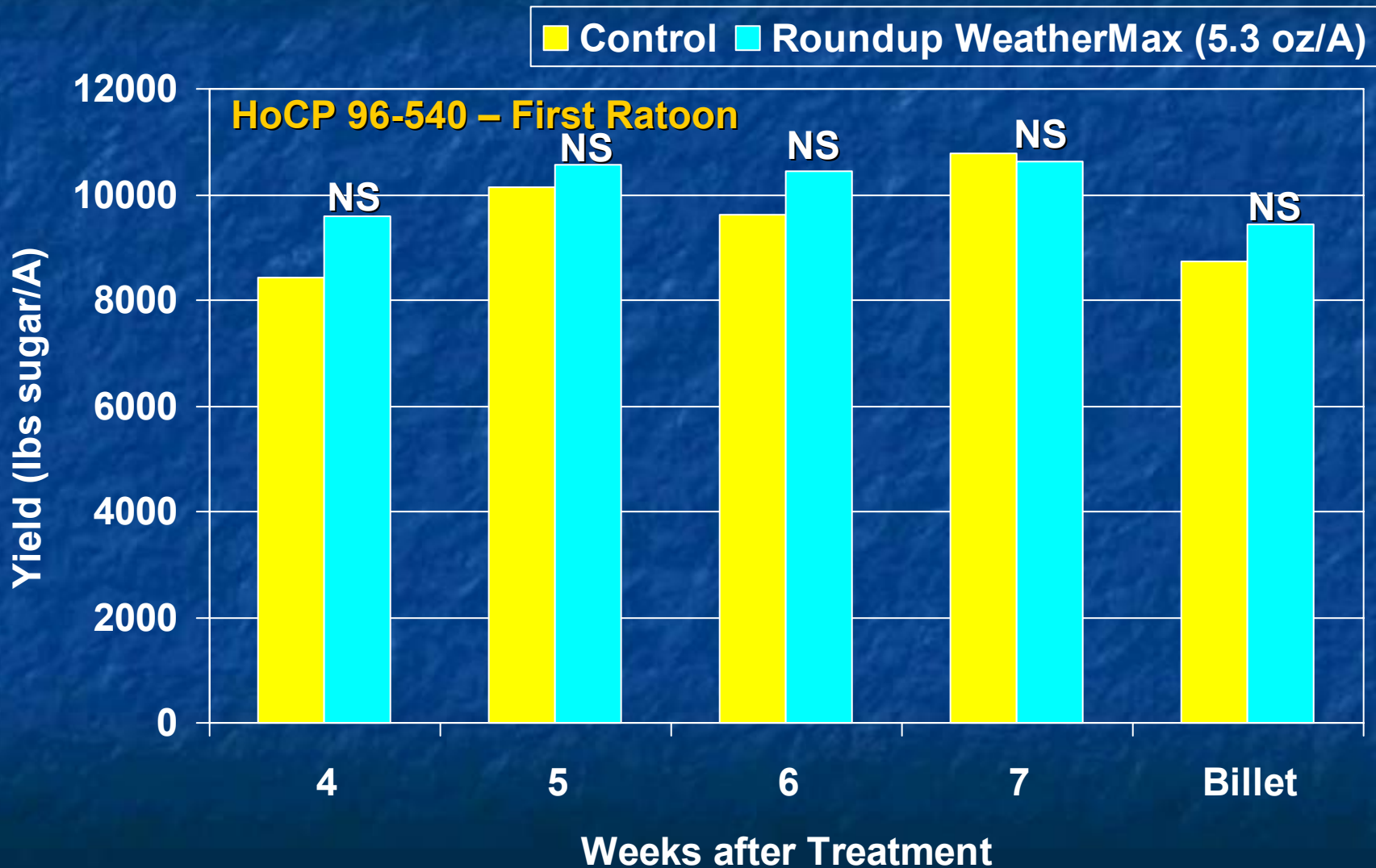
October 2nd – 3rd Application (7 WAT)



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

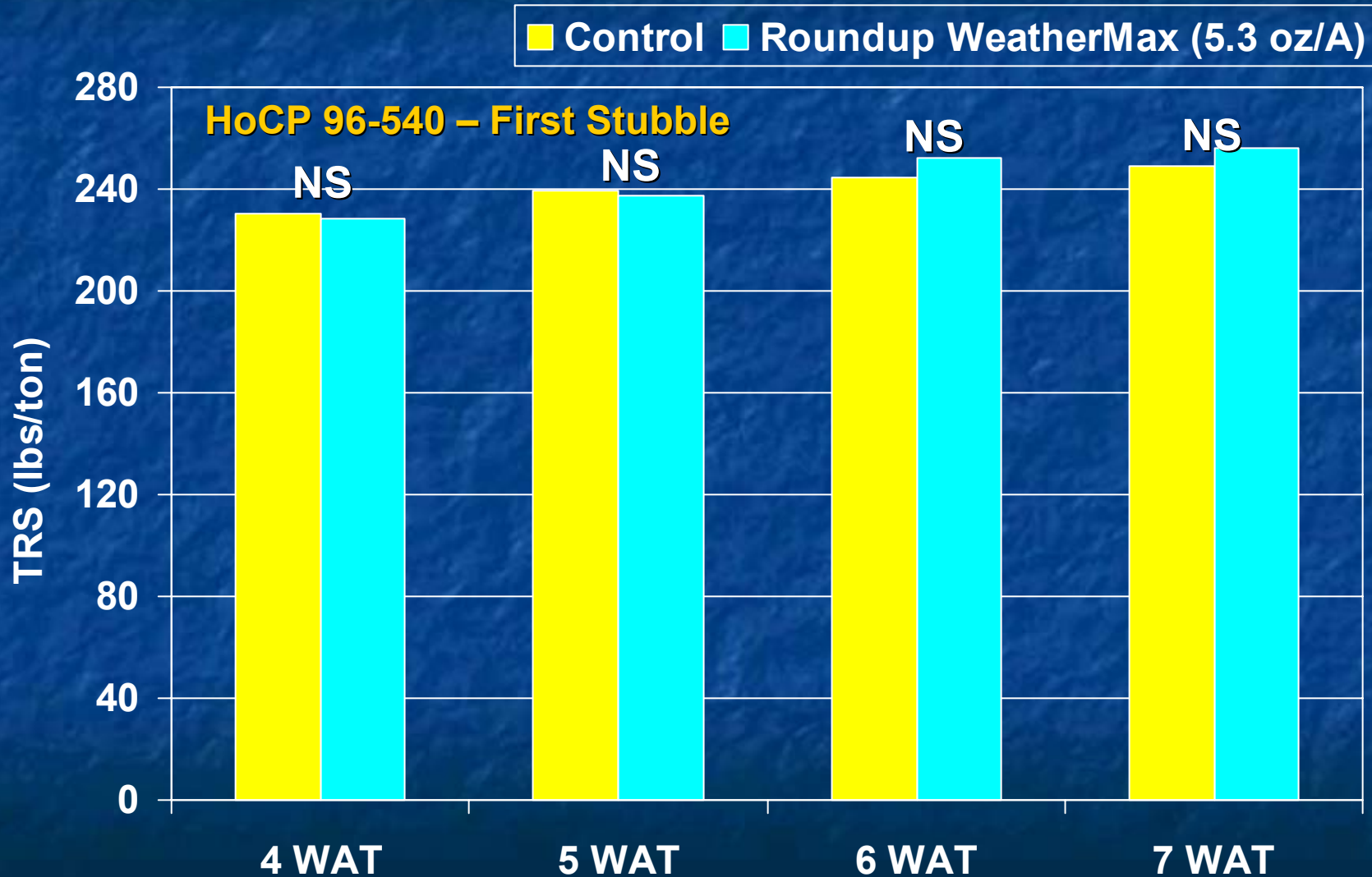
Sugarcane Response to Ripener

October 2nd -3rd Estimated Yield



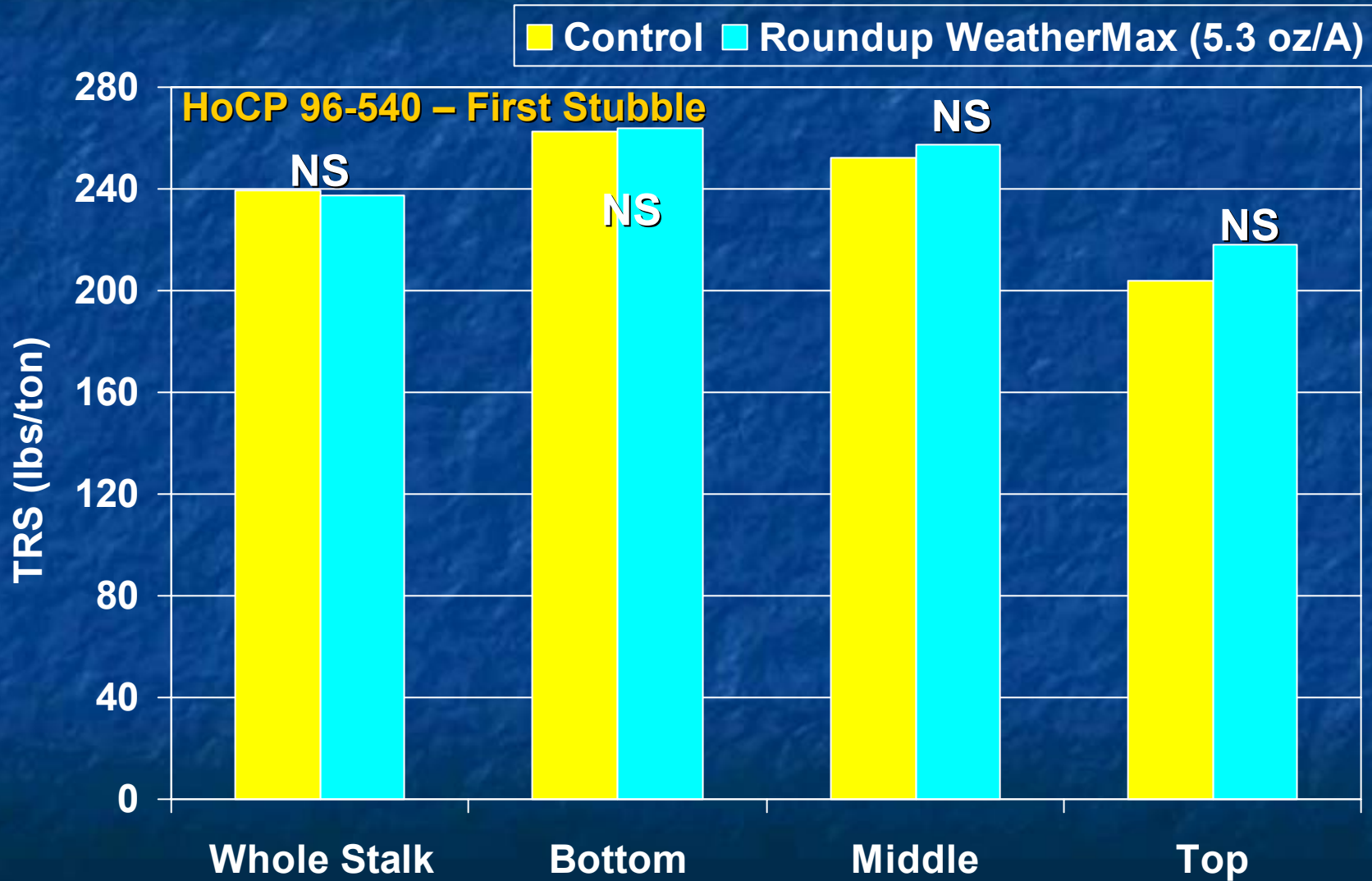
* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Sugarcane Response to Ripener November 1st Application



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Sugarcane Response to Ripener November 1st Application (5WAT)

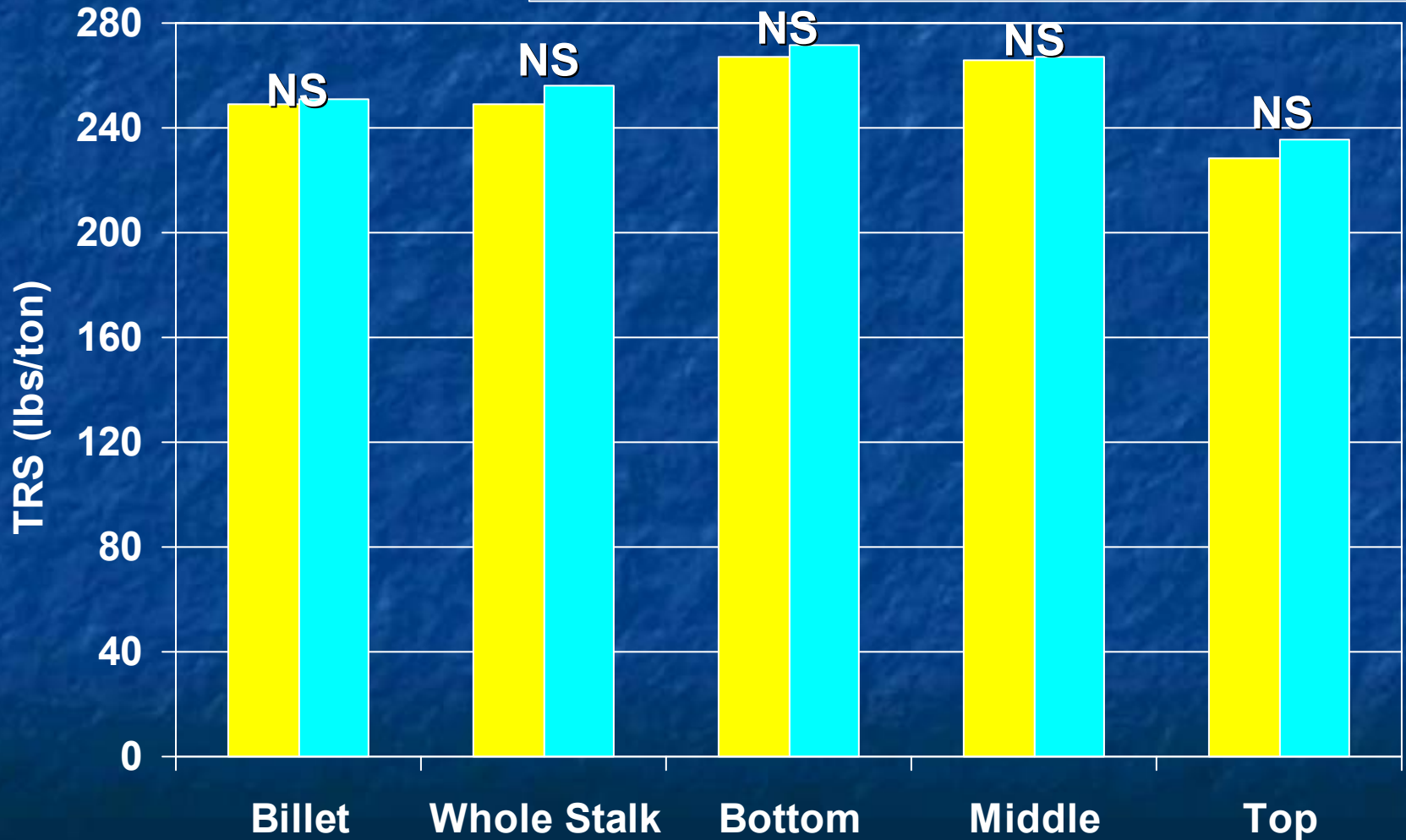


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Sugarcane Response to Ripener November 1st Application (7 WAT)

HoCP 96-540 – First Stubble

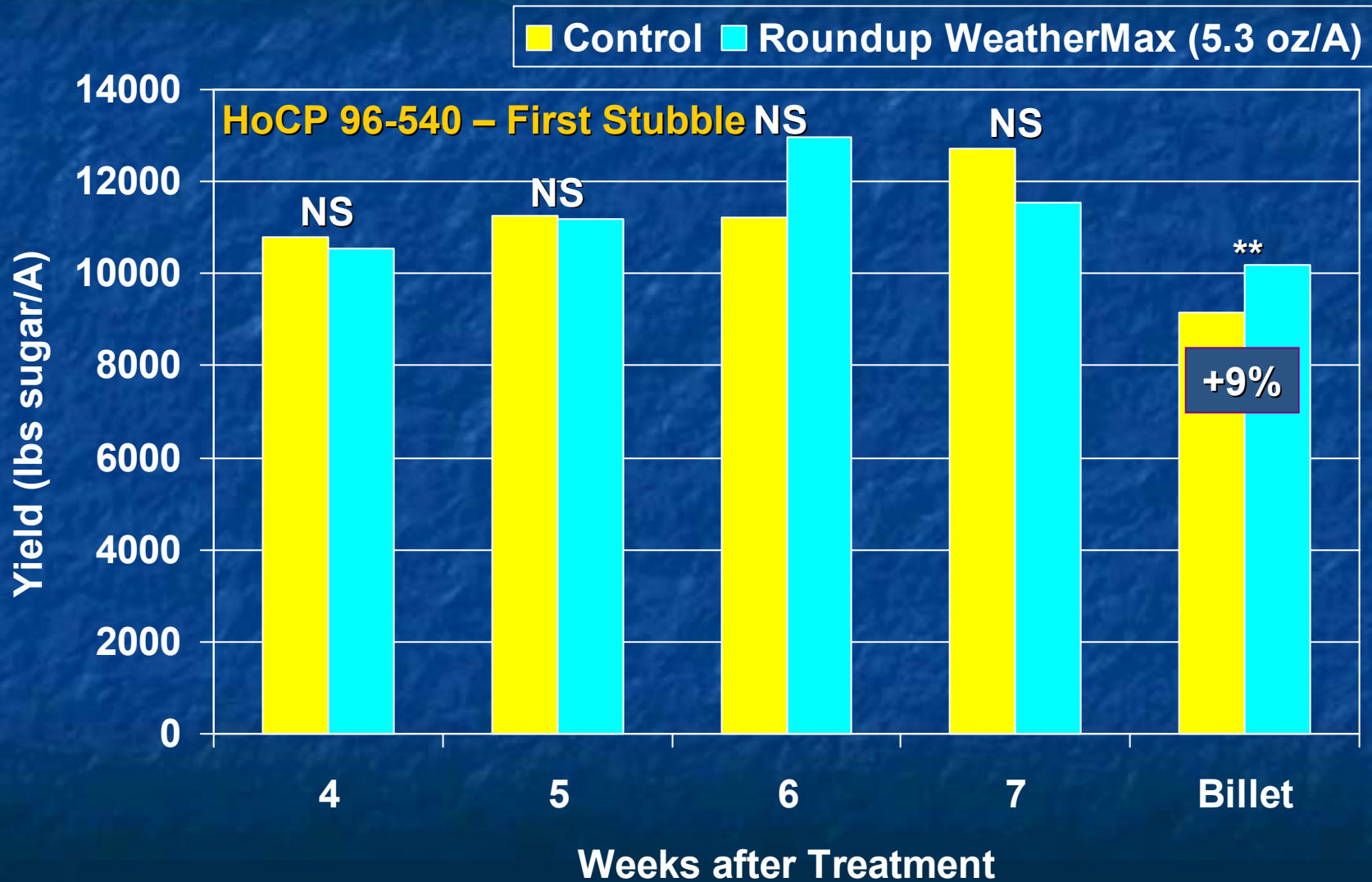
■ Control ■ Roundup WeatherMax (5.3 oz/A)



* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

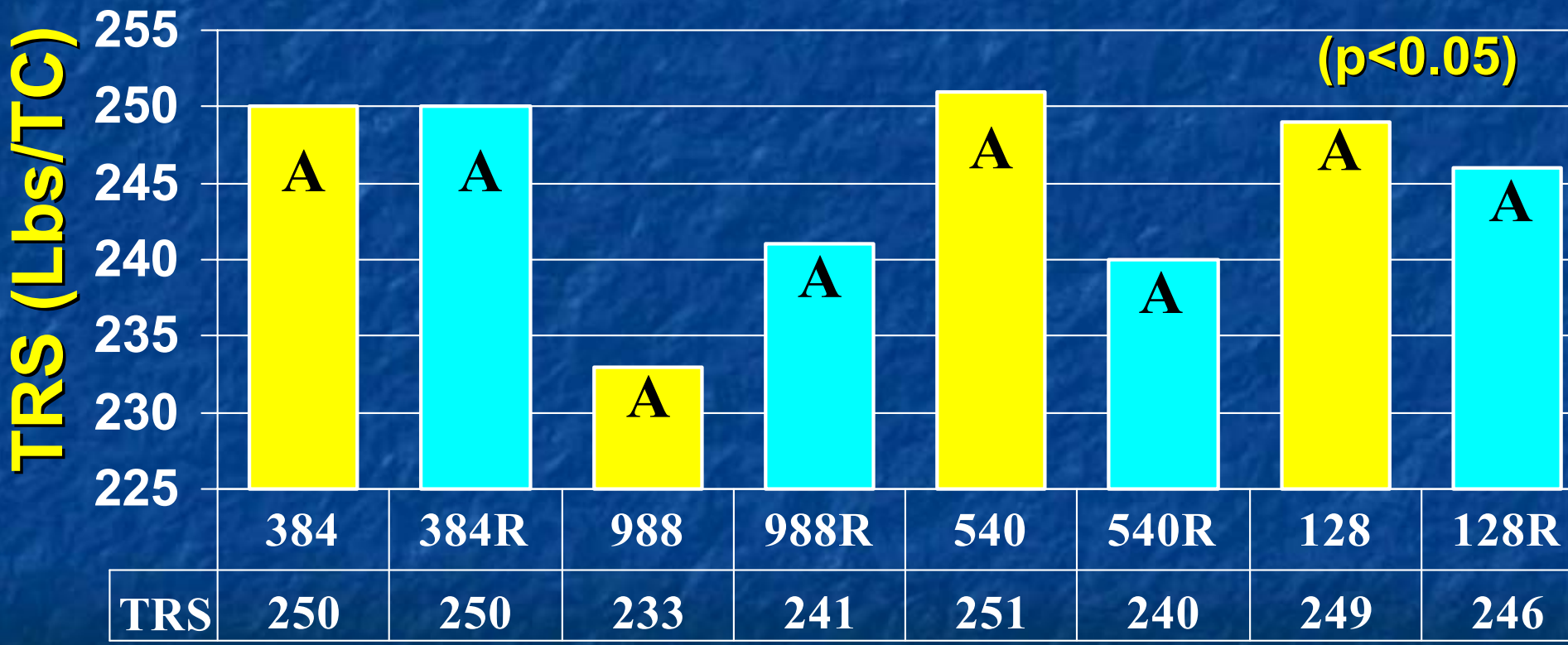
Sugarcane Response to Ripener

November 1st Estimated Yield



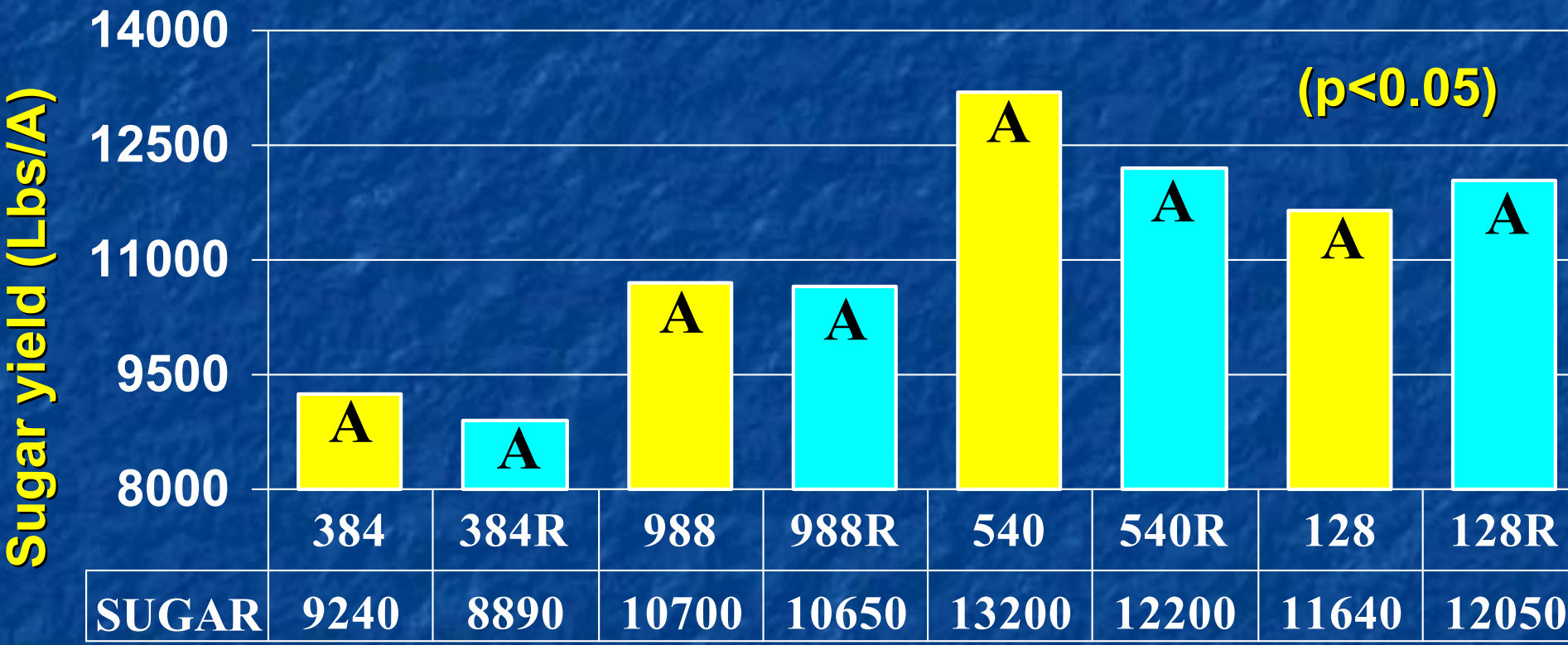
* = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

Late-season Ripening - Plant-cane Response (2005/06)



WeatherMAX applied at 5.3 oz/A on October 20th
Plots chopper harvested on Dec. 1st (42 DAT)

Late-season Ripening - Plant-cane Response (2005/06)

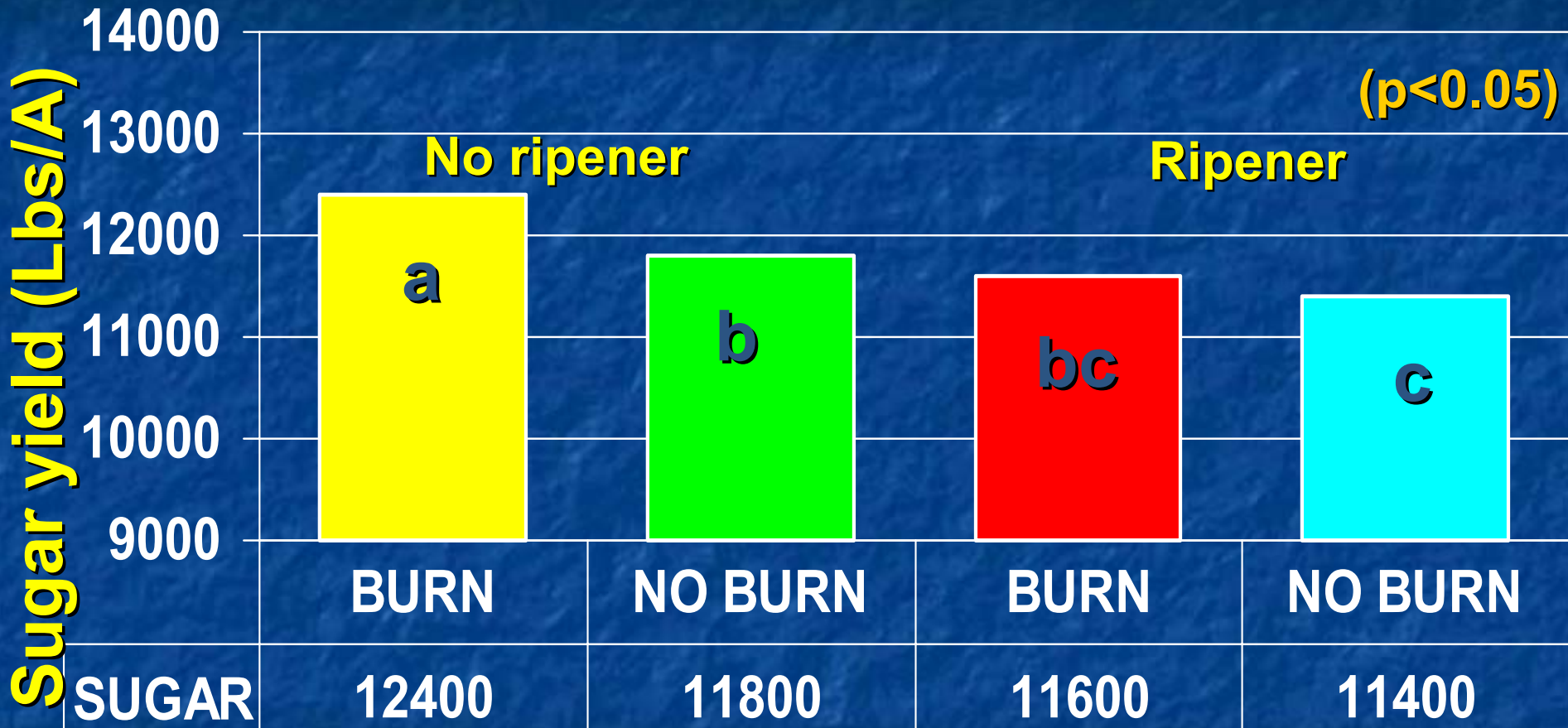


WeatherMAX applied at 5.3 oz/A on October 20th
Plots chopper harvested on Dec. 1st (42 DAT)



Residue and Ripeners

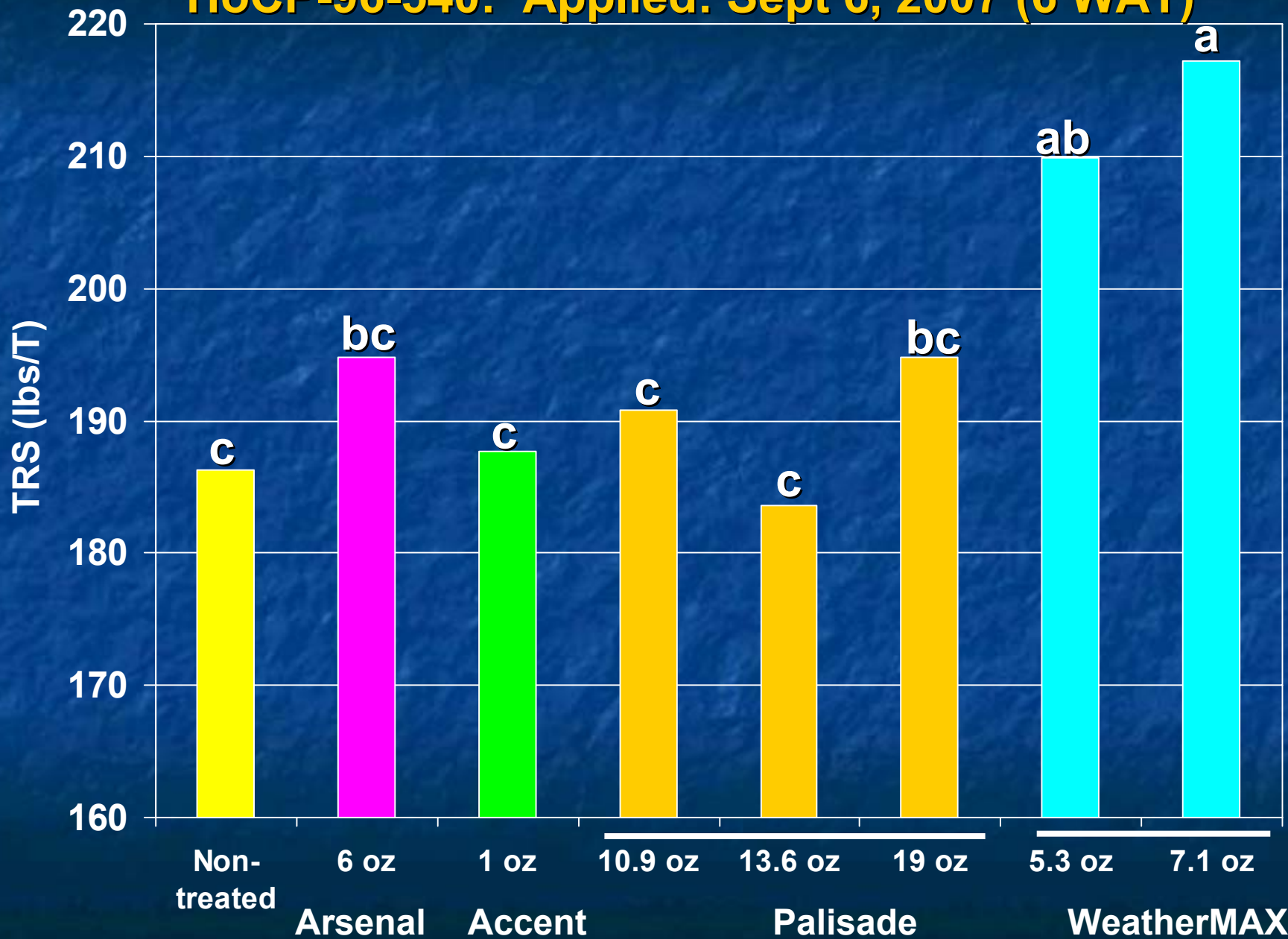
First-Stubble Response to Plant-cane Applications (2006/07) – Combined Response



WeatherMAX applied at 5.3 oz/A on Oct. 20th to Plant Cane of: LCP 85-384, Ho 95-988, HoCP 96-540, and L 97-128. Plots chopper harvested.

Glyphosate Alternatives – First Stubble

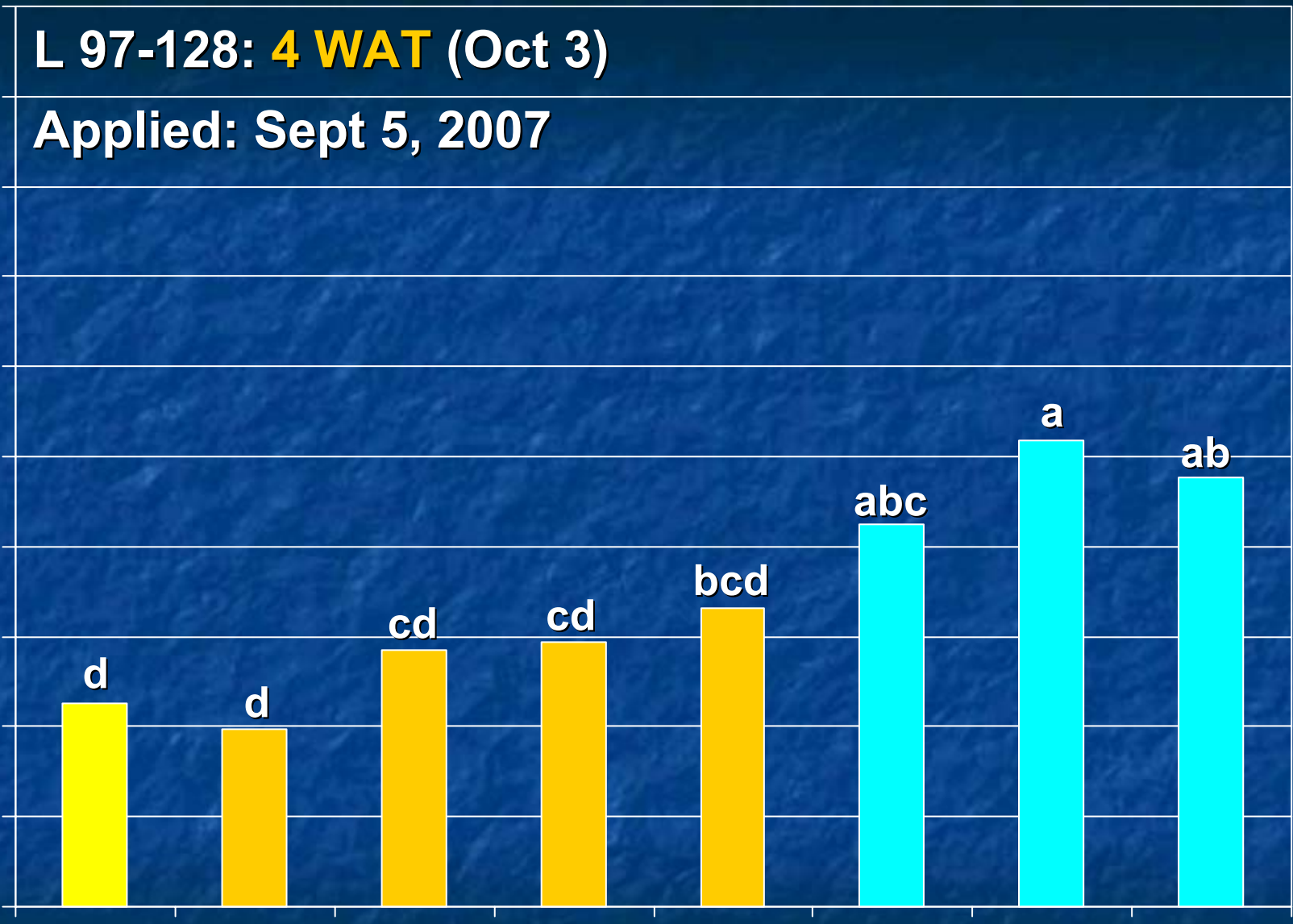
HoCP-96-540: Applied: Sept 6, 2007 (6 WAT)



L 97-128: 4 WAT (Oct 3)

Applied: Sept 5, 2007

TRS (lbs/T)



Non-treated

10.8 oz

13.6 oz

19 oz

27.2 oz

5.75 oz

7.7 oz

9.6 oz

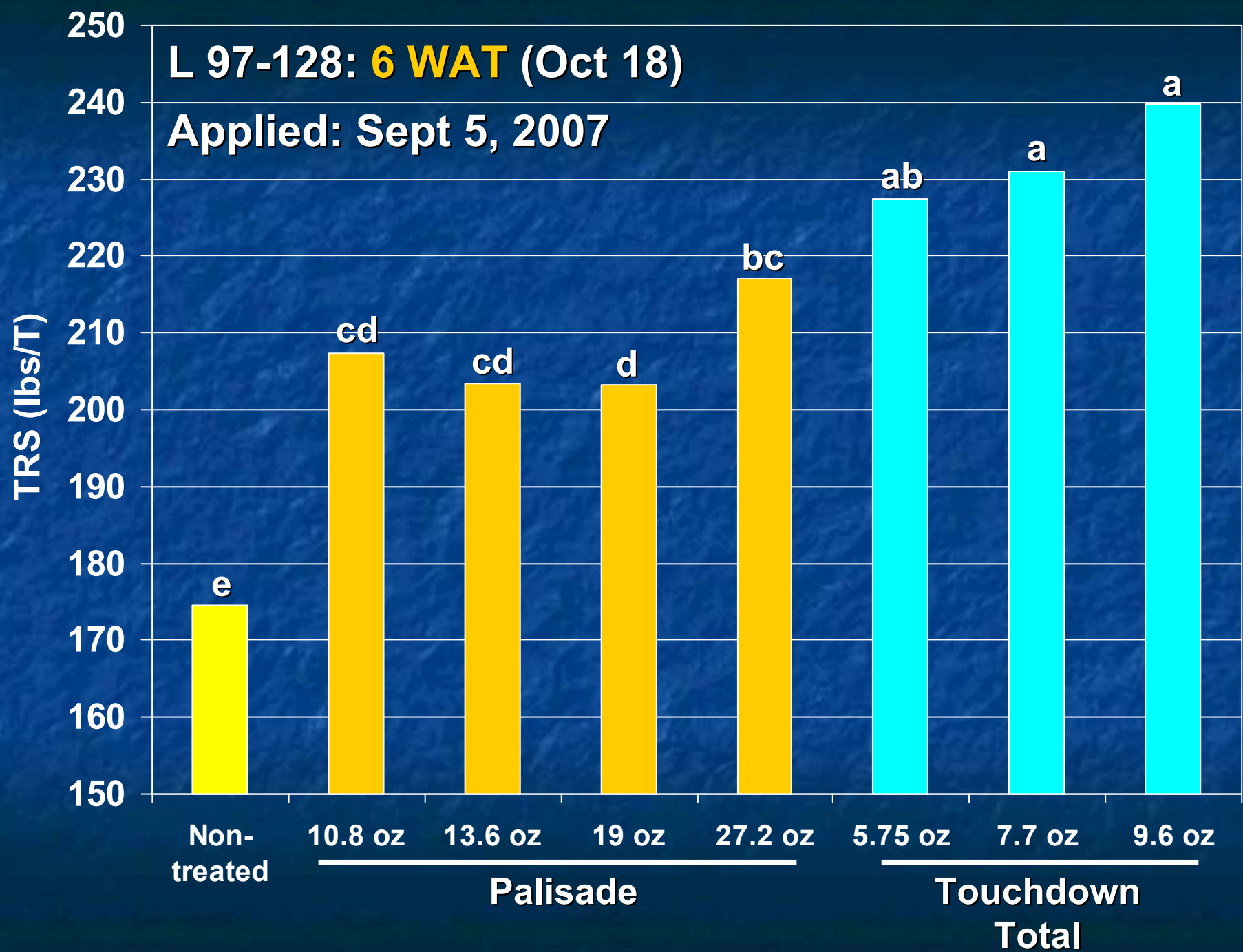
Palisade

Touchdown

Total

L 97-128: 6 WAT (Oct 18)

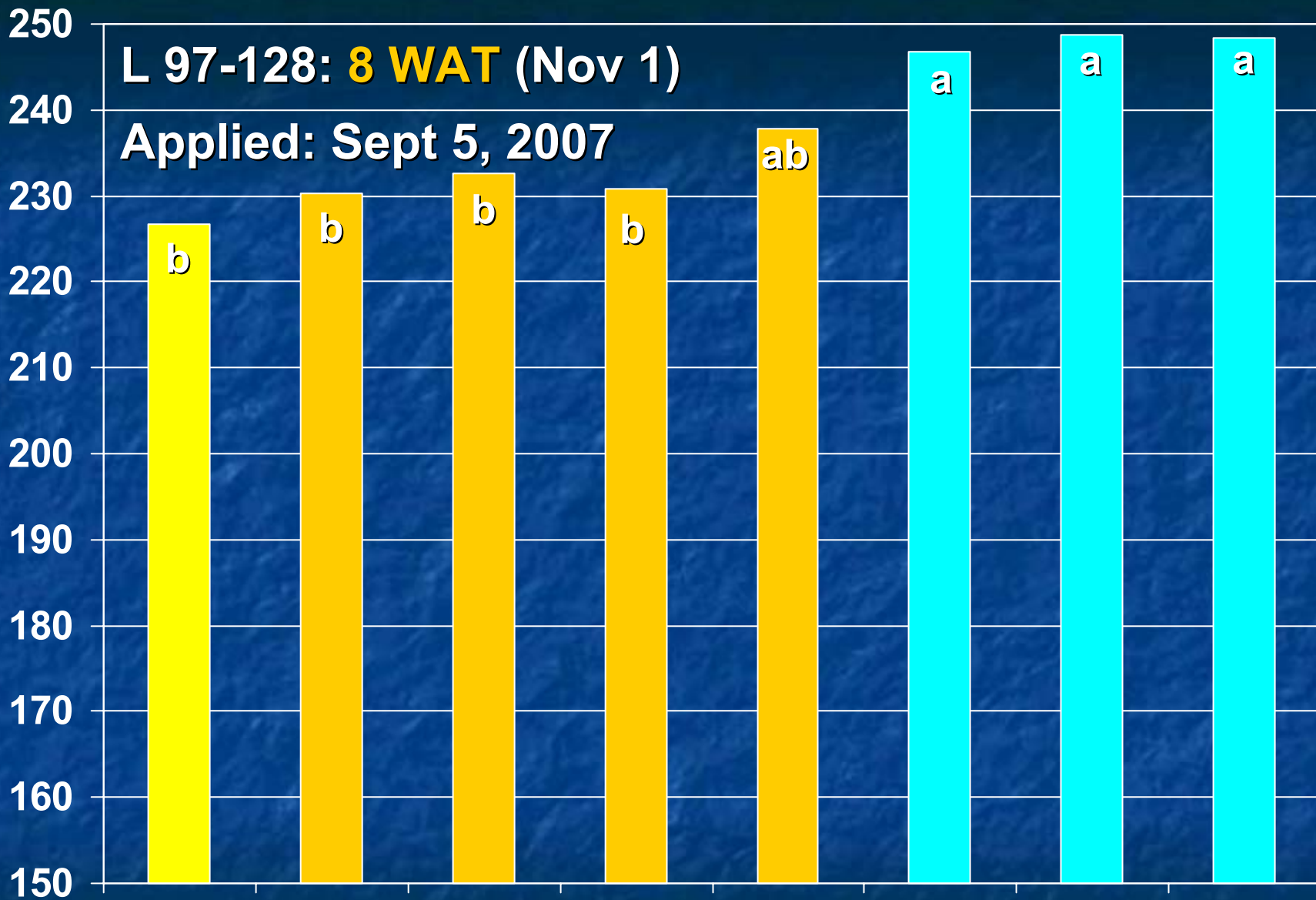
Applied: Sept 5, 2007



L 97-128: 8 WAT (Nov 1)

Applied: Sept 5, 2007

TRRS (lbs/T)



Non-treated

10.8 oz

13.6 oz

19 oz

27.2 oz

5.75 oz

7.7 oz

9.6 oz

Palisade

Touchdown

Total

Questions?



Effect of Treatment to Harvest Interval for Glyphosate Ripeners

- **Roundup WeatherMAX 5.3 oz/A**
- **HoCP 96-540 first stubble sugarcane**
- **Three harvest dates (chopper harvester)**
 - **October 9, 2007**
 - **November 14, 2007**
 - **December 18, 2007**
- **Four treatment to harvest intervals**
 - **Applied 4, 5, 6, 7 weeks before harvest dates**
 - **Compared to non-treated sugarcane**

Rainfree period following application

October 9 harvest application dates:

August 21	>24 hours
August 28	2 hours (0.58")
September 4	11 hours (0.01")
September 11	2.5 hours (0.18")

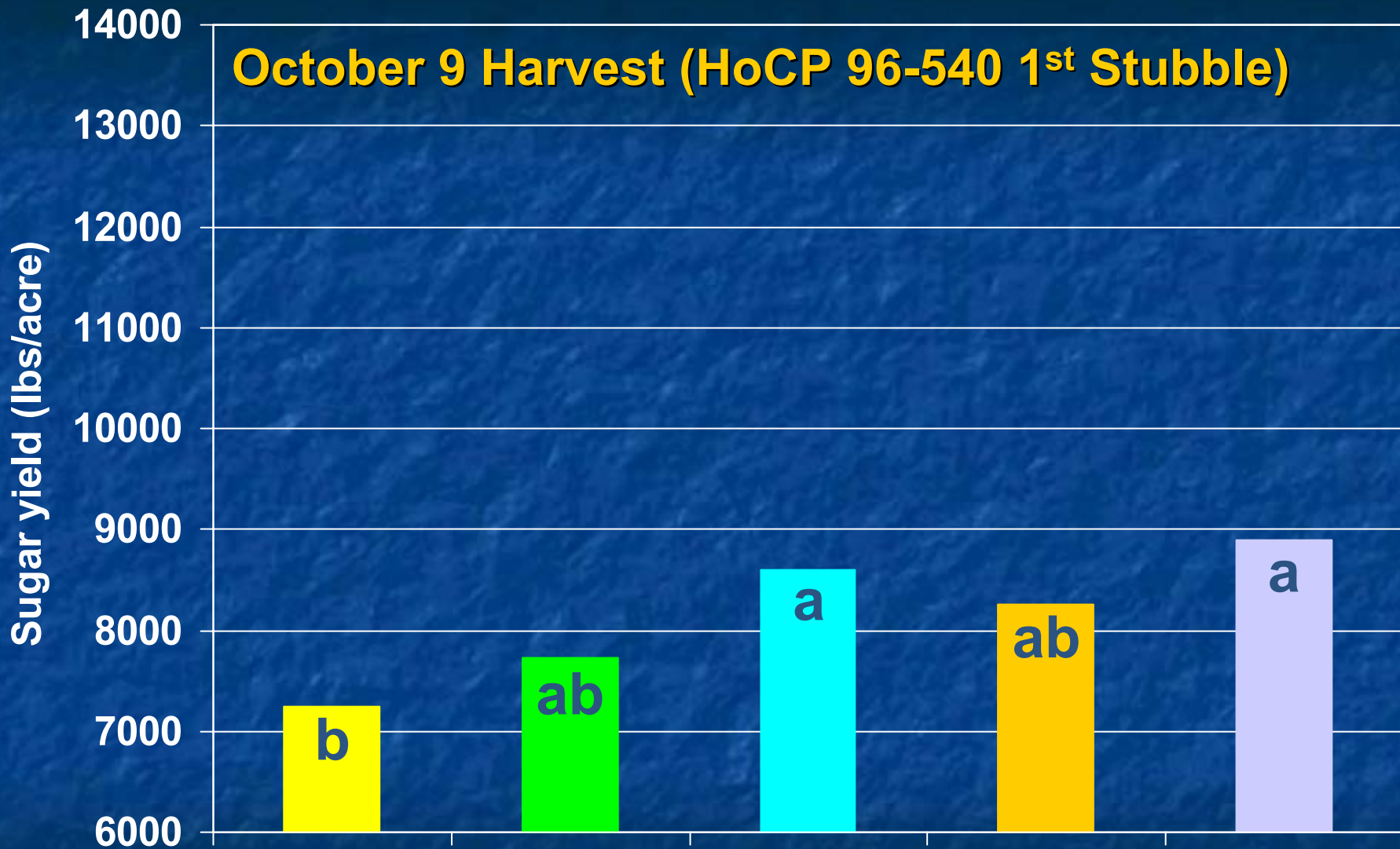
November 14 harvest application dates:

September 25	3.5 hours (0.37")
October 2	> 24 hours
October 9	> 24 hours
October 16	1 hour (0.02")

December 18 harvest application dates:

November 1	>24 hours
November 8	>24 hours
November 14	>24 hours
November 22	>24hours

October 9 Harvest (HoCP 96-540 1st Stubble)



Control

4

5

6

7

Treatment to Harvest Interval

Treatment date:

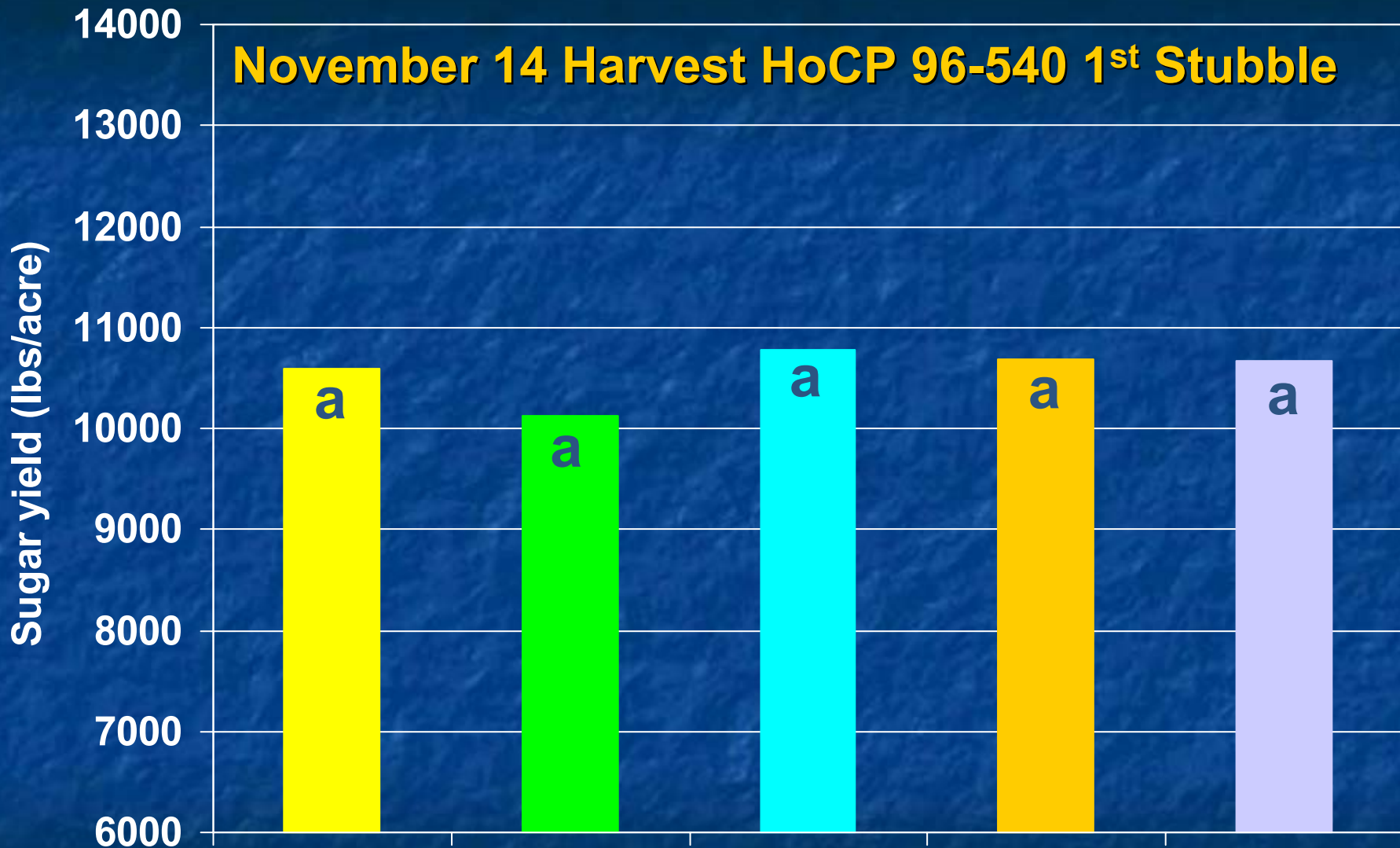
Sep 11*

Sep4

Aug 28*

Aug 21

November 14 Harvest HoCP 96-540 1st Stubble



Control

4

5

6

7

Treatment to Harvest Interval

Treatment date:

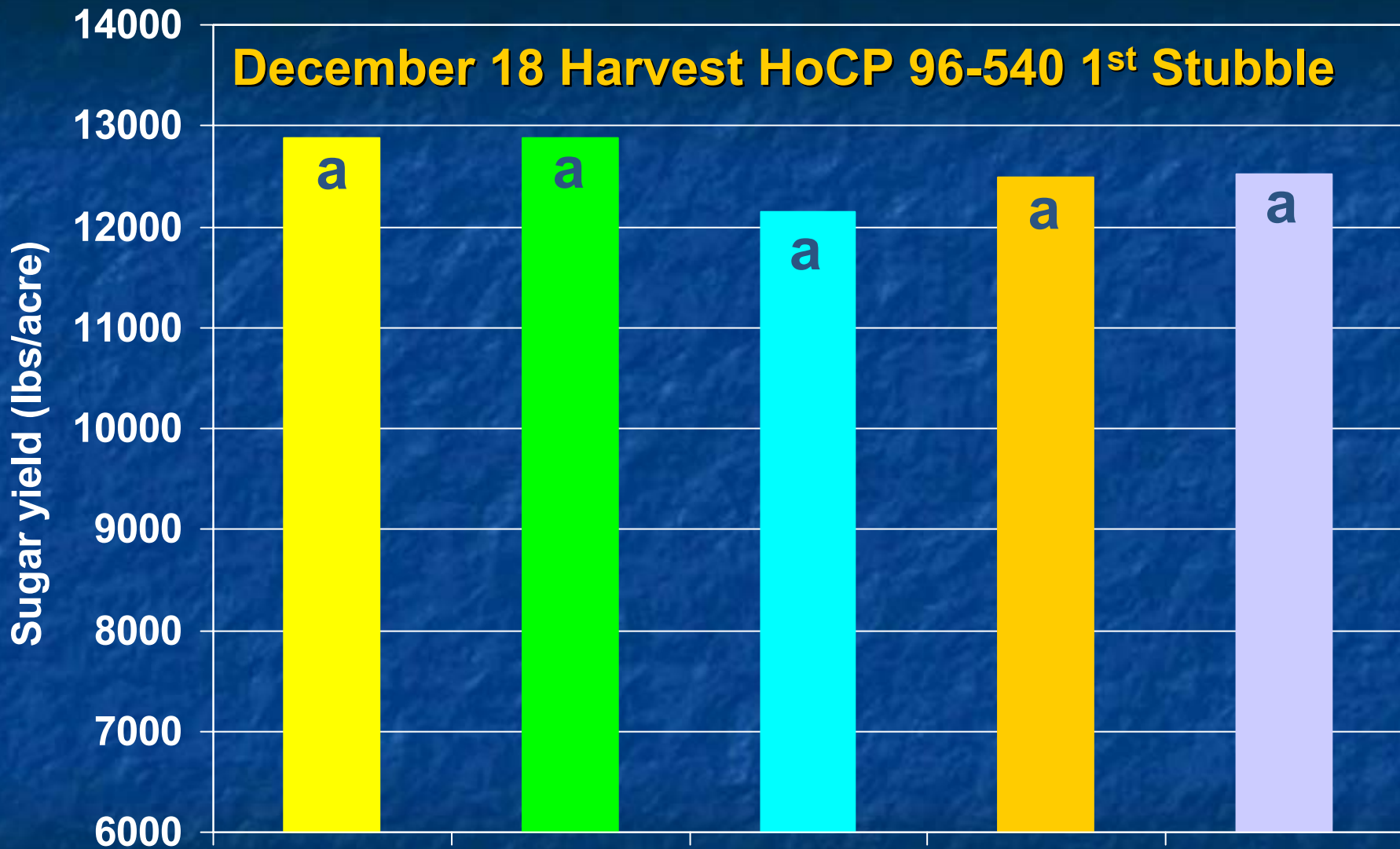
Oct 16

Oct 9

Oct 2

Sep 25*

December 18 Harvest HoCP 96-540 1st Stubble



Control

4

5

6

7

Treatment to Harvest Interval

Nov 22

Nov 14

Nov 8

Nov 1

Treatment date: