

Effect of Boron Application Timing and Rate in a B-deficient Field

2014 - Chris Rodgers Farm – Hickory KY

- Field had evidence of B deficiency in 2012 (soybean) and 2013 (tobacco)
- pH 7.6 in May 2014
- PD7309 set June 26
- Transplant water simulations applied June 27 at 120 gal/A
- Foliar applications made July 21 at 15 gal/A (3.5 weeks)
- Harvested early October
- Stripped mid-November

Trt	Timing	Borosol* Rate/A	B Rate/A
1	TPW	29 oz	0.25 lb
2	TPW	58 oz	0.5 lb
3	TPW	116 oz	1.0 lb
4	Foliar	29 oz	0.25 lb
5	Foliar	58 oz	0.5 lb
6	Foliar	116 oz	1.0 lb
7	Untreated	-	-

*Boron product used was Borosol, 10% B (11 lbs/gal, 1.1 lbs B/gal)

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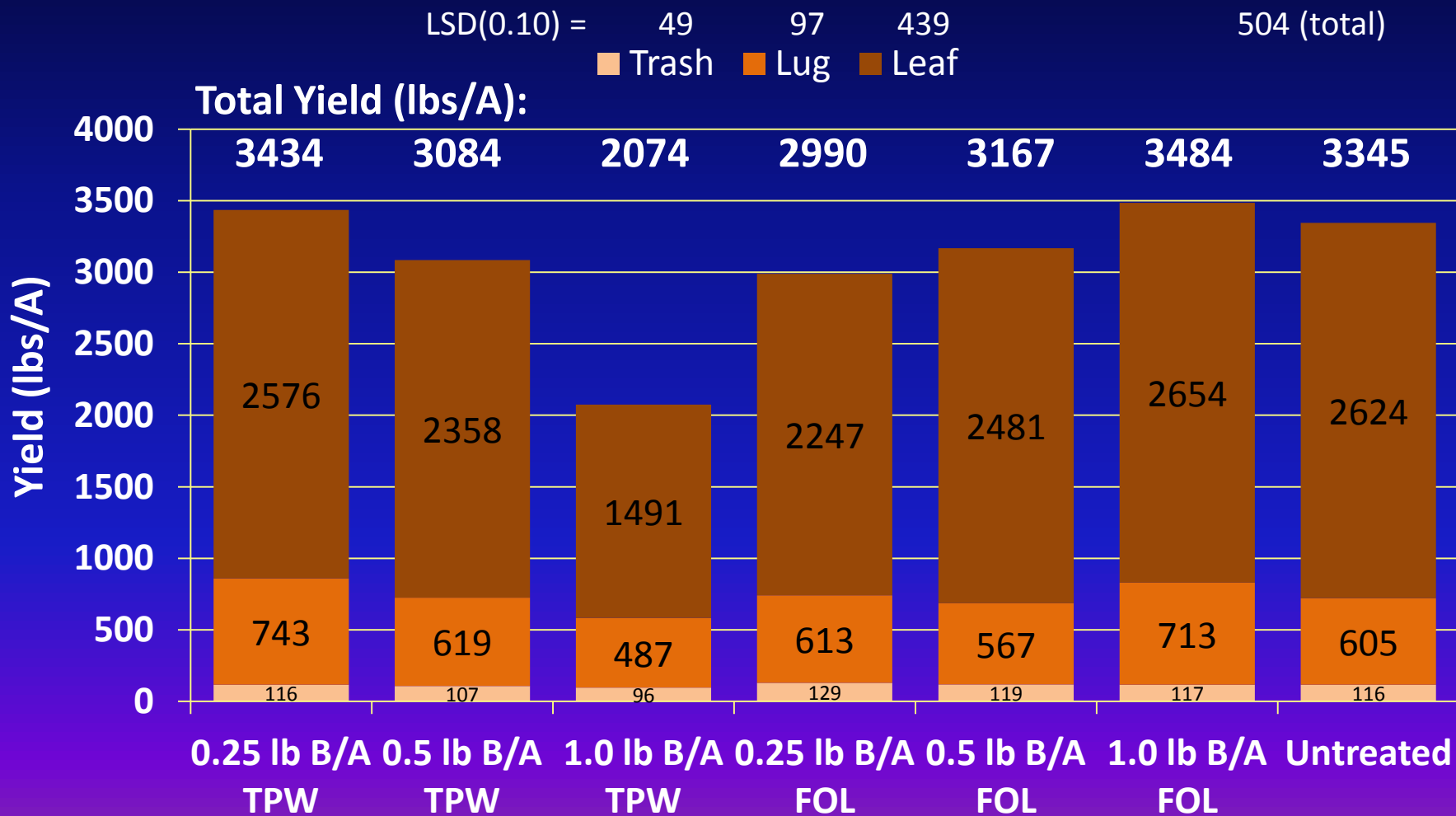
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Early-season injury from Transplant Water (TPW) treatments, % Stand, and Vigor

Trt	B Timing	B Rate	TPW Injury (3 wks)	% Stand (3 wks)	Vigor 4 wks 1-10, 10 best	Preharvest Vigor 1-10, 10 best
1	TPW	0.25 lb	20 b	99.1 a	5.8 b	7.5 b
2	TPW	0.50 lb	34 b	98.7 a	6.0 b	7.5 b
3	TPW	1.0 lb	66 a	71.1 b	2.8 c	4.8 c
4	Foliar (3.5 wks)	0.25 lb	-	97.4 a	6.5 b	8.3 ab
5	Foliar (3.5 wks)	0.50 lb	-	97.4 a	8.0 a	8.8 ab
6	Foliar (3.5 wks)	1.0 lb	-	98.7 a	8.8 a	9.5 a
7	Untreated	-	-	97.8 a	8.3 a	9.5 a
		LSD(0.10) =	16	0.09	0.9	1.34

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2014 - Chris Rodgers Farm – Hickory KY - Yield

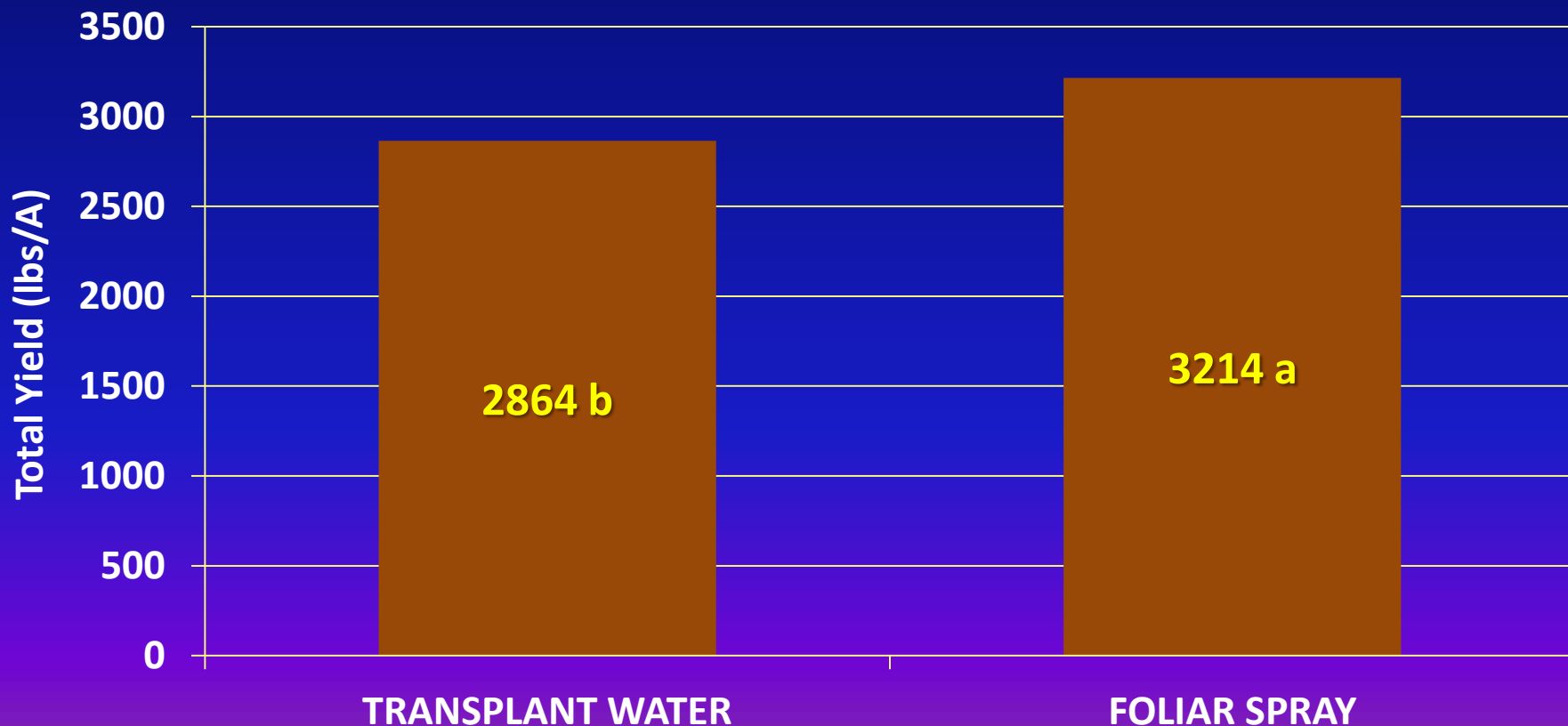


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2014 - Chris Rodgers Farm – Hickory KY - Yield

Main Effect of Application Timing (Data averaged over Rate)

Total Yield, LSD(0.10) = 323

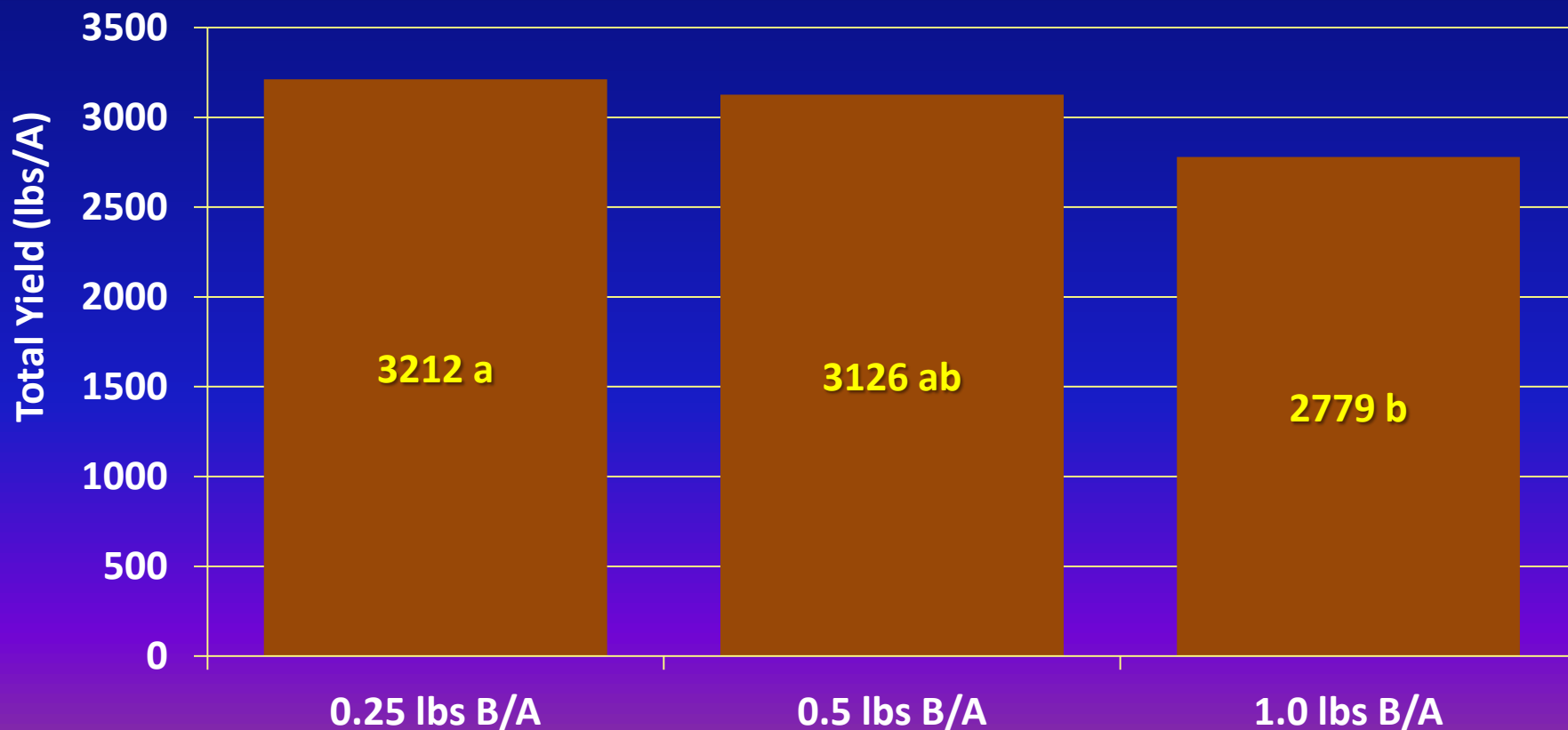


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2014 - Chris Rodgers Farm – Hickory KY - Yield

Main Effect of Application Rate (Data averaged over Timing)

Total Yield, LSD (0.10) = 395



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2014 - Chris Rodgers Farm – Hickory KY - Summary

- Extensive injury seen with transplant water rates higher than 0.25 lbs B/A
 - Most severe at 1.0 lbs B/A
 - Injury resulted in yield reductions at 1.0 lb B/A TPW
- Improved growth and vigor seen with increasing foliar rates
 - No statistical differences in total yield between foliar rates.