

2011 Helena Tobacco Fertility Trial

MSU West Farm – Murray, KY

- Objective of Trial:

Determine dark tobacco response to transplant water and foliar applications of Helena supplemental fertility products.
- Standard fertility program applied to all plots according to soil test recommendation:
 - 150 lbs N/A + 80 lbs P₂O₅/A + 180 lbs K₂O/A pretransplant broadcast and incorporated as urea, DAP, and sulfate of potash
 - Additional 125 lbs N/A applied sidedress with 32% UAN liquid
 - Total 275 lbs N/A, 80 lbs P₂O₅/A, 180 lbs K₂O/A
- Treatment applications made as setter water or 2 broadcast foliar applications prebloom at 25 gal/A.

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- Tobacco Variety: PD 7309LC dark set June 14
–40” rows, 32” plant spacing = 4,900 plants/acre
- Randomized complete block design with 4 replications.
- Plots 4-rows, 40 ft. long
– All rows treated, data collected from center 2 rows
- Data collected: mid-season crop vigor rating, dark-fired yield and quality.

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MSU West Farm – Murray, KY - Treatments

Treatment	Rate	Timing
Standard Fertility HM9754 (NC0801) HM0128 (NC0802) HM0211 (NC0803)	Soil test N-P-K 1 gal/A (200 gal) 2 qt/A (200 gal) 1 qt/A (200 gal)	At transplanting
Standard Fertility HM9754 (NC0801) HM0128 (NC0802) HM0211 (NC0803) HM 1028	Soil test N-P-K 1 gal/A (200 gal) 2 qt/A (200 gal) 1 qt/A (200 gal) 2 qt/A (200 gal)	At transplanting
Standard Fertility HM9309A (NC0804) HM0128 (NC0802)	Soil test N-P-K 2 gal/A 1 qt/A	Pre-Bloom (2 apps.)
Standard Fertility HM9309A (NC0804)	Soil test N-P-K 2 gal/A	Pre-Bloom (2 apps.)
Standard Fertility HM9865 (NC0805)	Soil test N-P-K 1 qt/A	Pre-Bloom (2 apps.)
Standard Fertility HM9865 (NC0805) HM1028	Soil test N-P-K 1 qt/A 1 pt/A	Pre-Bloom (2 apps.)
Standard Fertility (untreated check)	Soil test N-P-K only	-

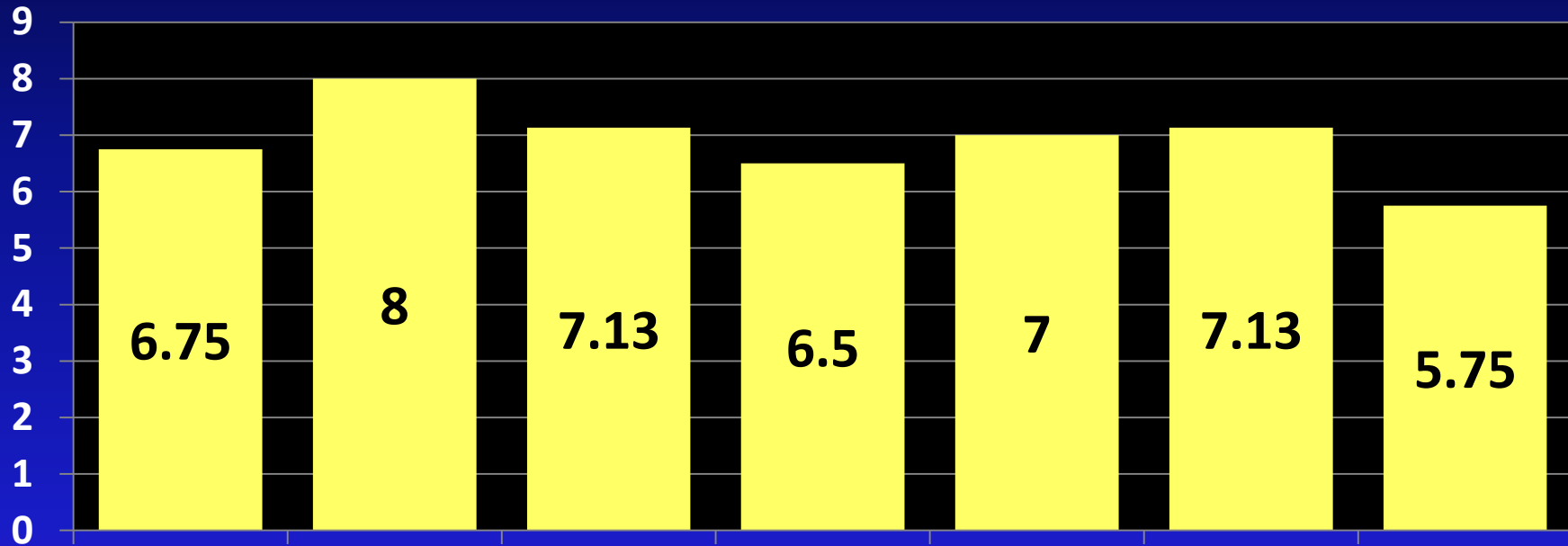
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MSU West Farm – Murray, KY – Crop Vigor August 31

LSD_{0.10} = 1.1

■ Crop Vigor (1-10, 10 best)

Dark-Fired Crop Vigor (1-10, 10 best)



801+802+803 TPW

801+802+803+1028 TPW

804+802 prebloom (2)

804 prebloom (2)

805 prebloom (2)

805+1028 prebloom (2)

standard fertility

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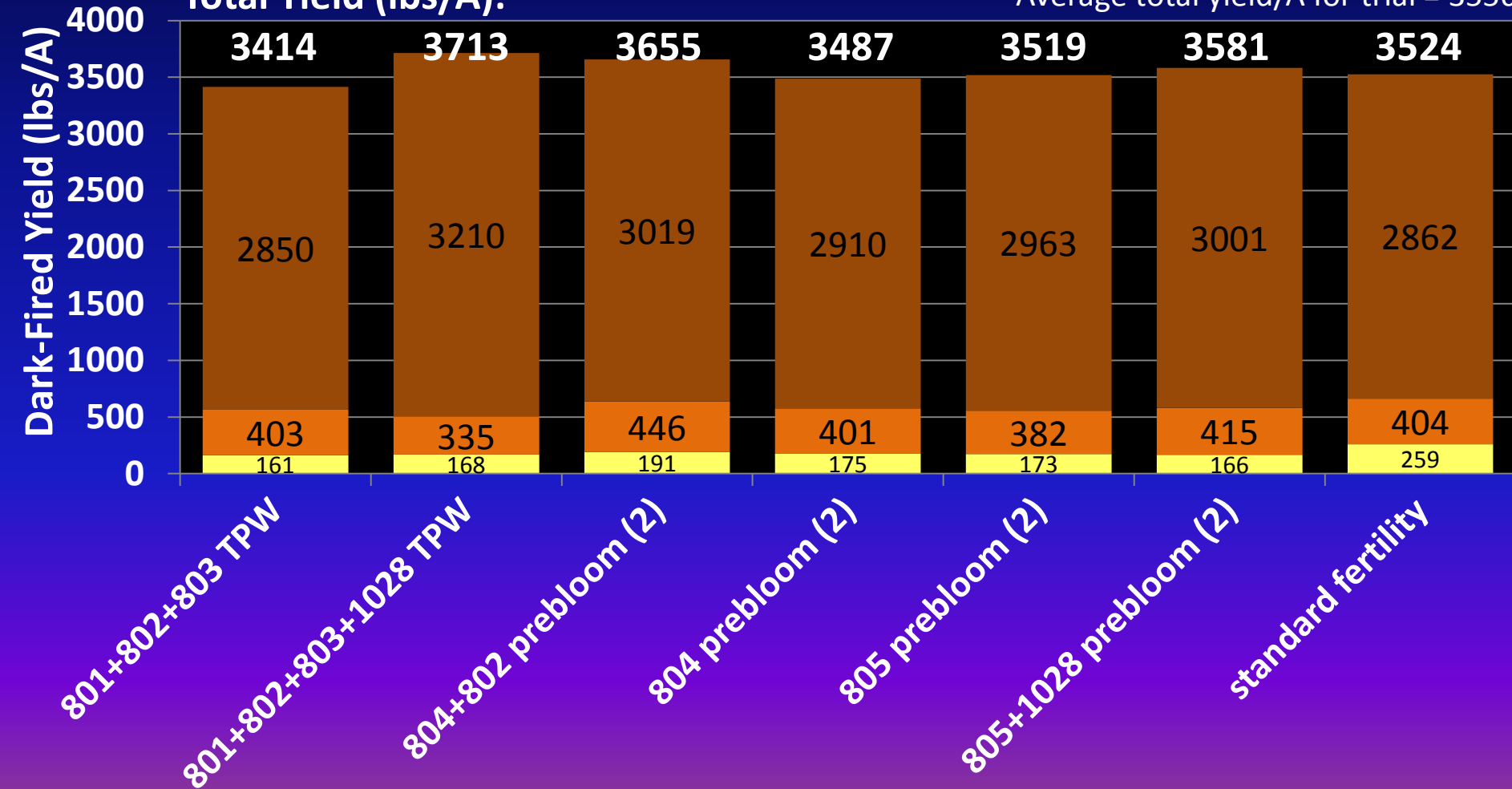
MSU West Farm – Murray, KY – Dark-Fired Yield

LSD_{0.10} = 82 91 334 260 (total)

 Lug Second Leaf

Total Yield (lbs/A):

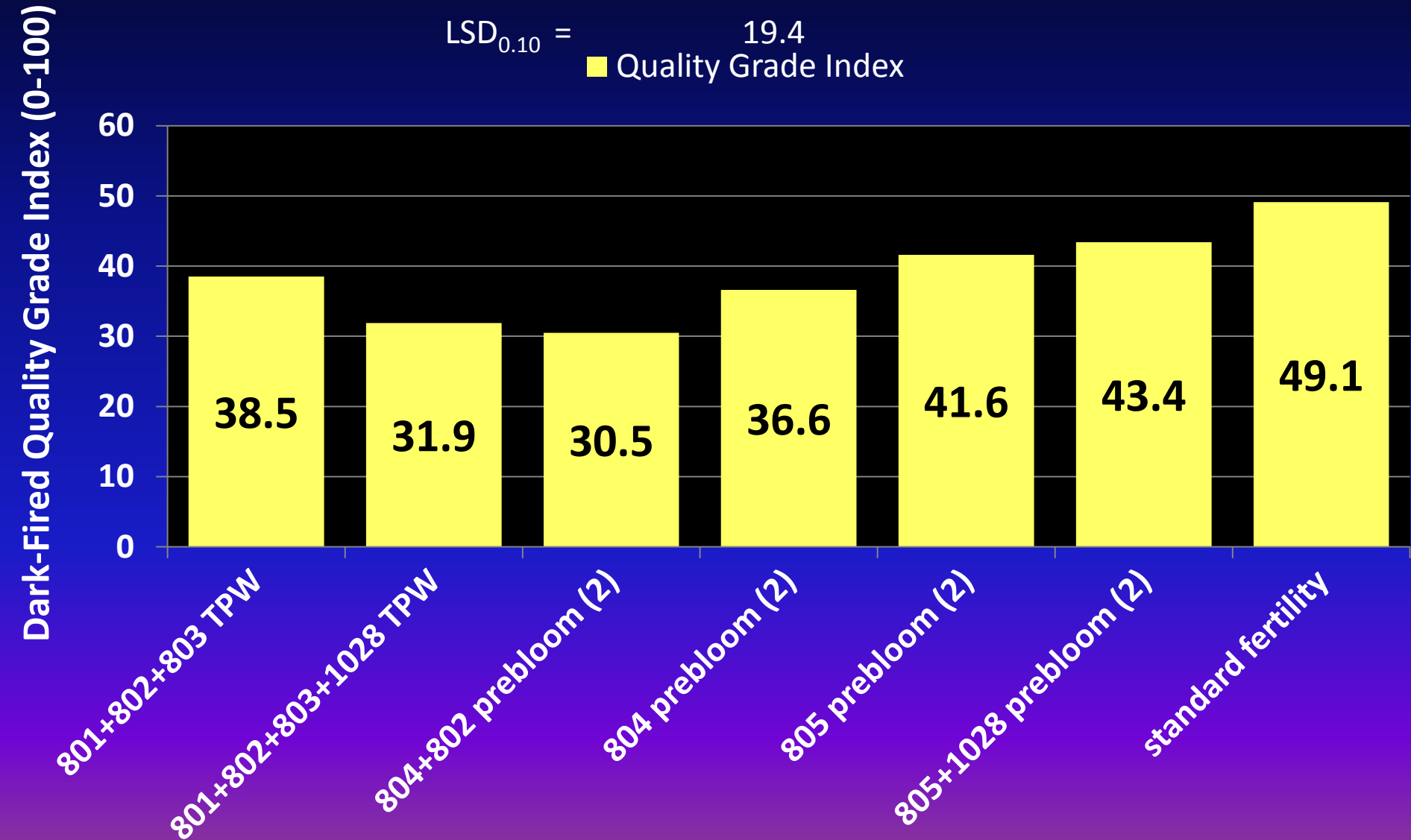
Average total yield/A for trial = 3556



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MSU West Farm – Murray, KY – Dark-Fired Quality Grade Index

LSD_{0.10} = 19.4
■ Quality Grade Index



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MSU West Farm – Murray, KY – Data Summary

- Small differences seen in crop vigor in supplemental treatments compared to untreated.
- Few statistically significant differences in yield for individual grades and total yield, no statistical differences in quality grade index in any treatment compared to standard fertility check.