

Dark Tobacco Response to Potassium

MSU West Farm - 2012

- **Objective 1:** determine dark tobacco response to applied potassium where soil K index is low.
- **Objective 2:** Compare response to various K rates from broadcast applications before transplanting and banded applications after transplanting.
- Soil Test K index = 102 (low) 290 lbs K₂O/A recommended.
- Trial was randomized complete block with 4 replications.
 - Plots 4 rows, 40 ft. long.
- Plots drip irrigated
- Tobacco harvested October 9
- Fire-cured

Treatment	Lbs K ₂ O/A	Application Method
1	0	-
2	145 (0.5x)	Broadcast
3	290 (1x)	Broadcast
4	435 (1.5x)	Broadcast
5	145 (0.5x)	Band
6	290 (1x)	Band
7	435 (1.5x)	Band

*Broadcast applications made June 8 and incorporated with Roterra.

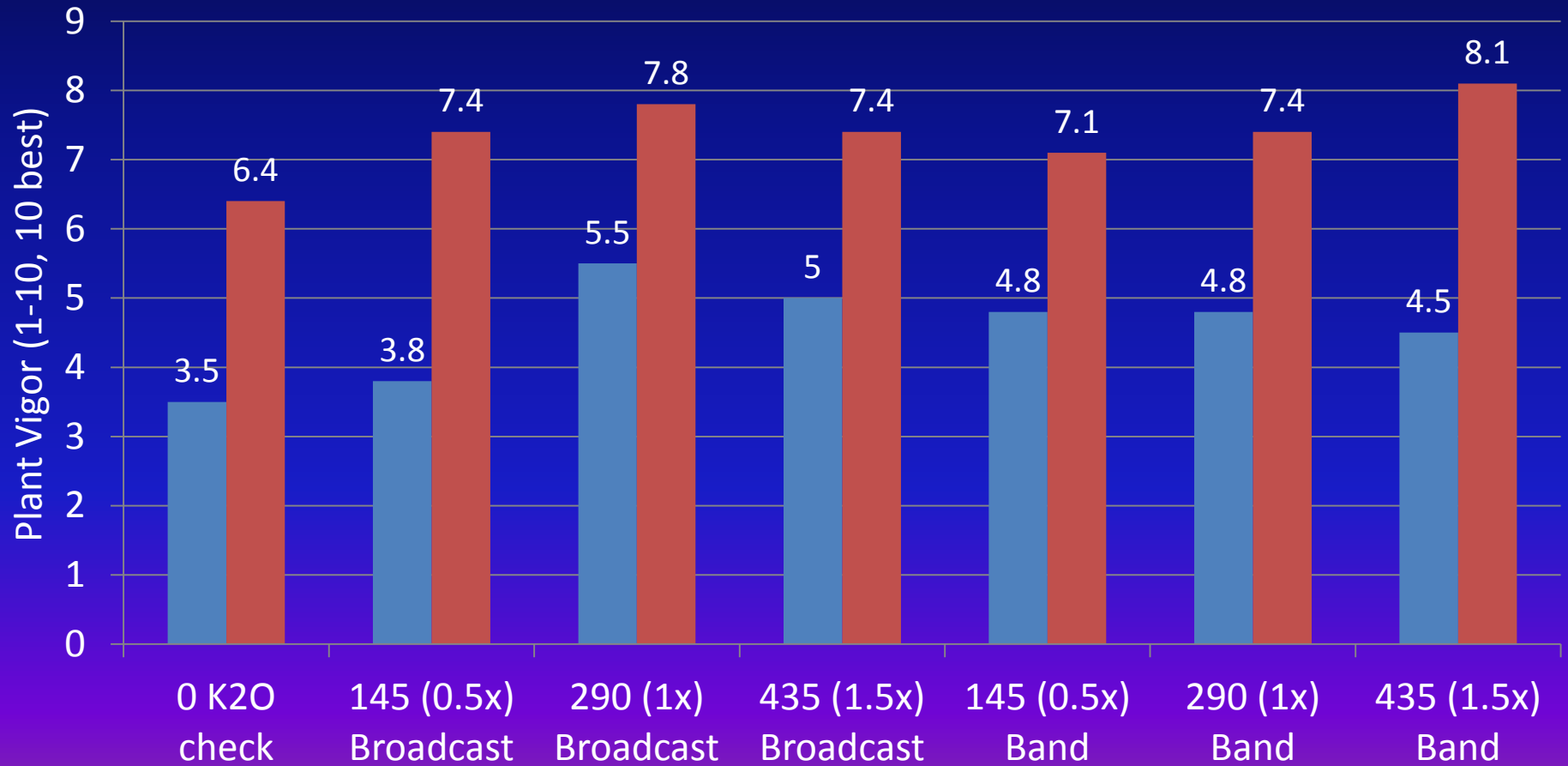
*PD7309 set June 12-13 on 41" rows and 32" plant spacing (4781 plants/A)

*Banded applications applied to both sides of each row on June 18 and cultivated in.

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MSU West Farm – 2012 – Late Season Plant Vigor

LSD(.10) = 2.2 0.7
■ 7-Aug ■ 9-Oct (harvest)

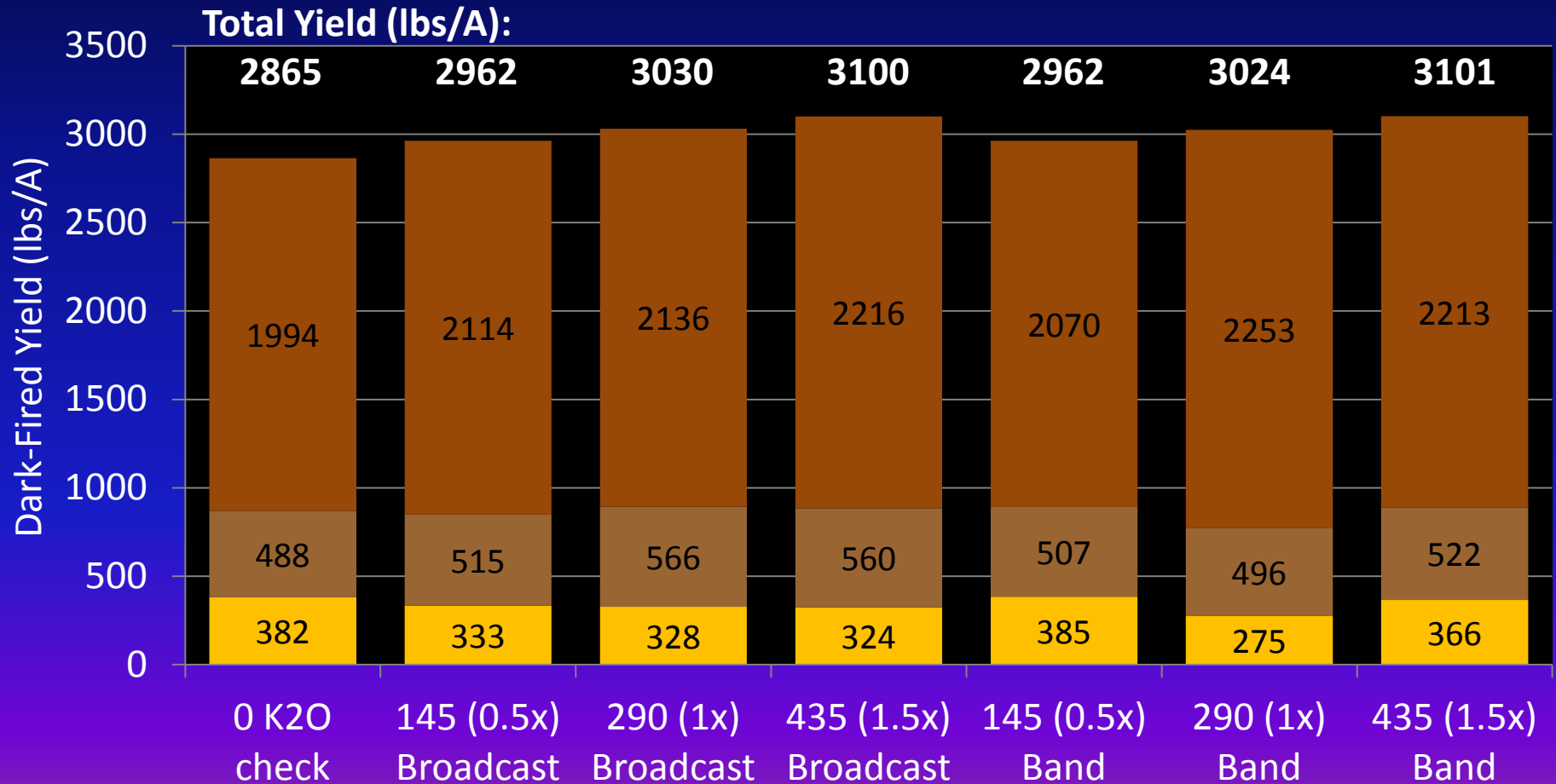


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MSU West Farm – 2012 – Dark Fired Yield

LSD(.10) = 98 76 312 371 (total)

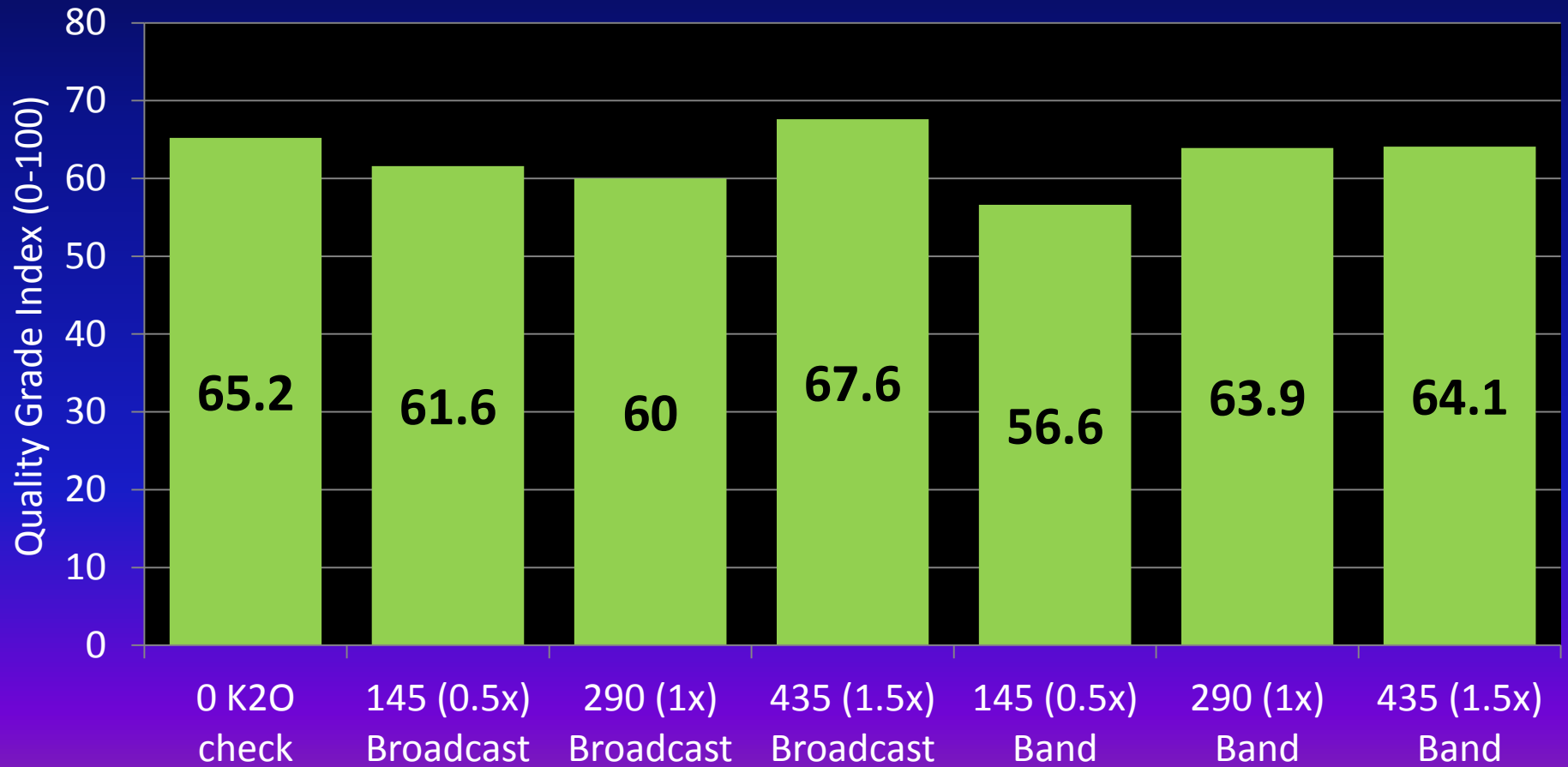
 Lug Second Leaf



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MSU West Farm – 2012 – Dark Fired Quality Grade Index

LSD(.10) = 14.6
■ Quality Grade Index



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- If potassium prices are \$0.75/lb K_2O and dark-fired prices are \$2.65/lb:
 - 145 lbs K_2O/A costs \$109
 - 290 lbs K_2O/A costs \$218
 - 435 lbs K_2O/A costs \$326

 - 145 lbs K_2O/A made an extra \$265/A (\$156 ROI)
 - 290 lbs K_2O/A made an extra \$451/A (\$233 ROI)
 - 435 lbs K_2O/A made an extra \$636/A (\$310 ROI)