

# **Influence of Harvest Date and Nitrogen Rates on Yield and TSNA of Burley Tobacco.**

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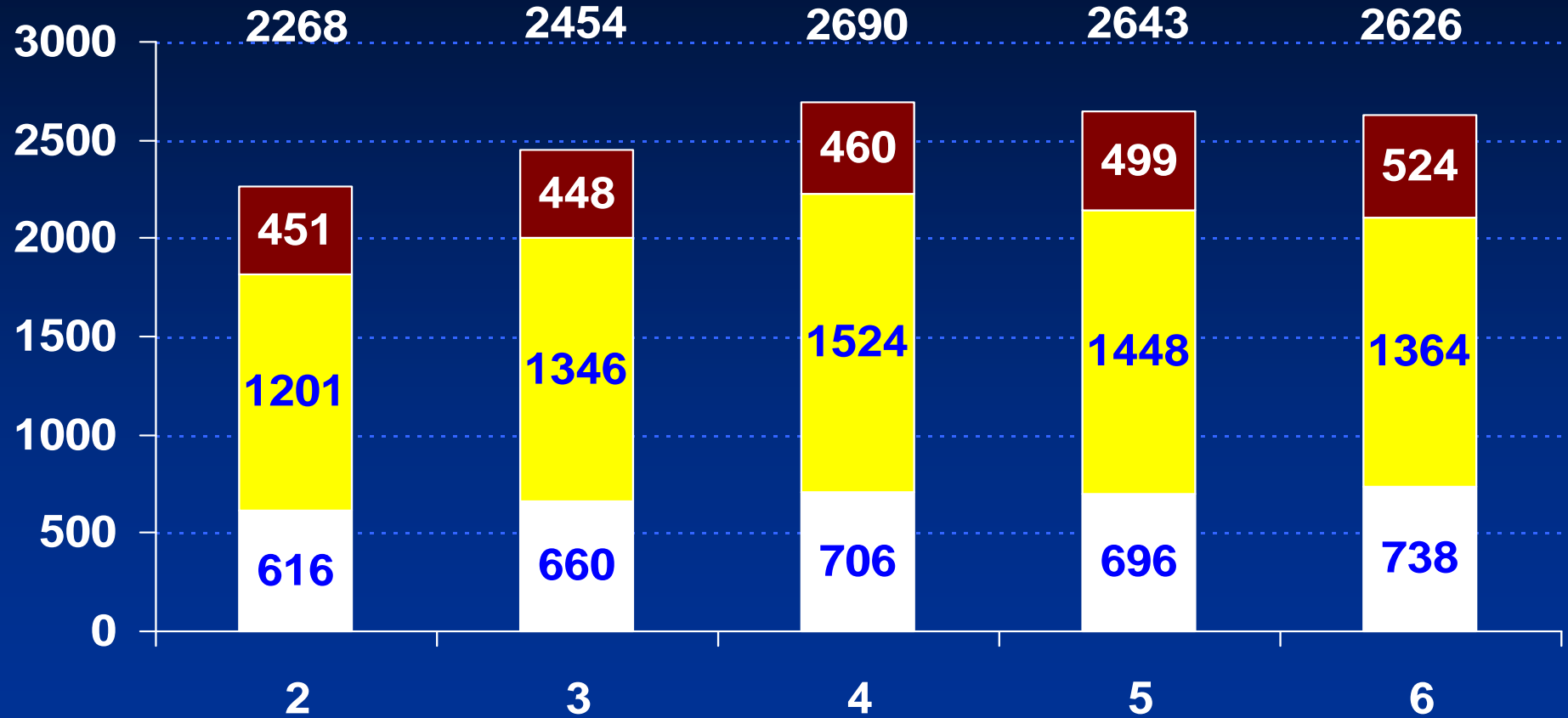
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<sup>3</sup>Virginia Tech University

# Typical growers rates for nitrogen on burley tobacco

- Kentucky
  - Rates have come down recently
  - 225 to 275 lbs. N/A (252 to 308 kg/ha)
- Tennessee
  - About 230 lbs. N/A (260 kg/ha)
- Virginia
  - 175 to 200 lbs. N/A pre-plant (196 to 212 kg/ha)
  - 25 to 50 lbs. N/A side dress (28 to 56 kg/ha)

# Harvest Date Across Five Locations 2000

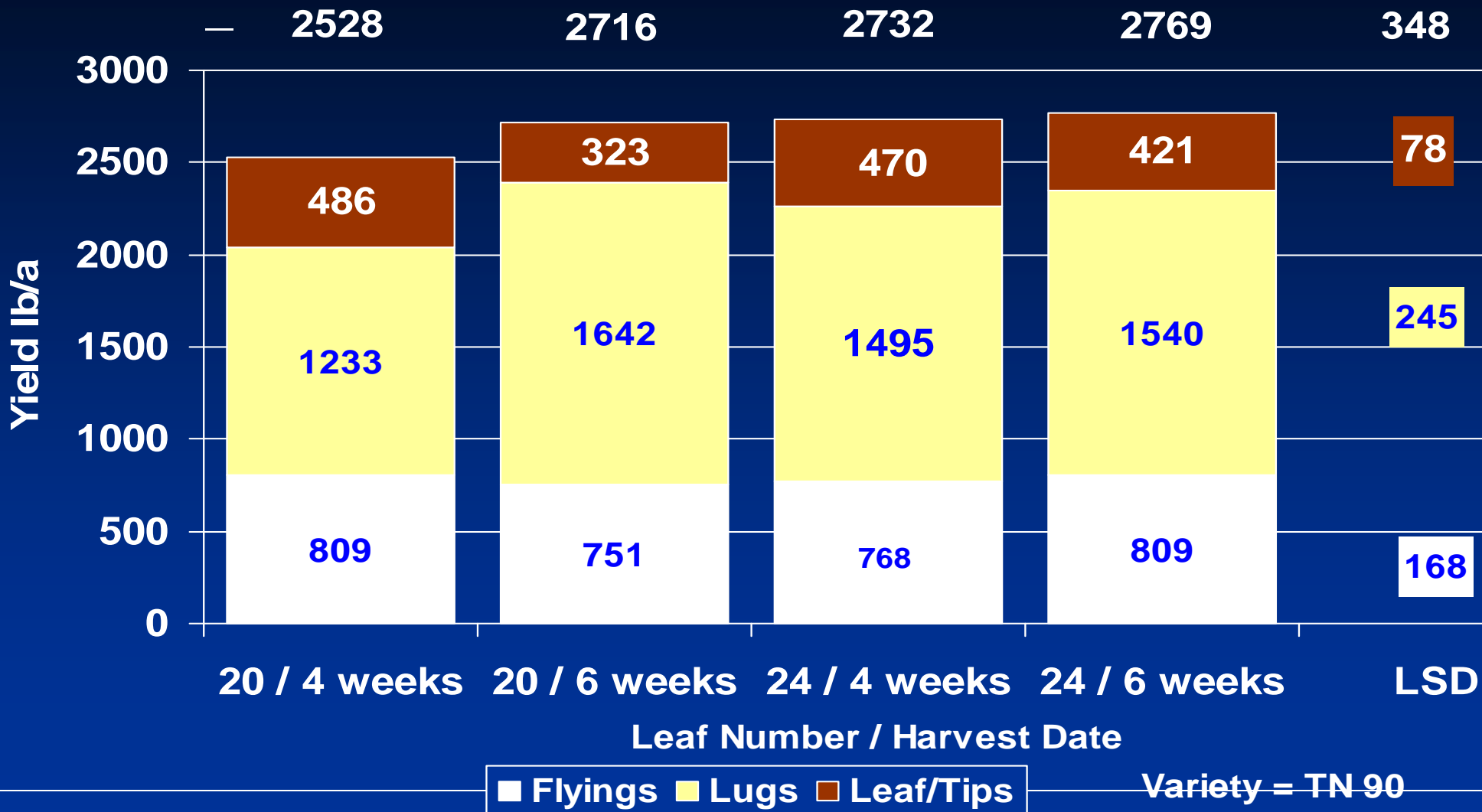


–HSD 0.05 = 74 168 55 201

–Locations = Bath, Boyle, Clay, Jackson & Pulaski

# Topping and Harvesting Burley Tobacco

## Trimble Co. – Terry Tilley Farm



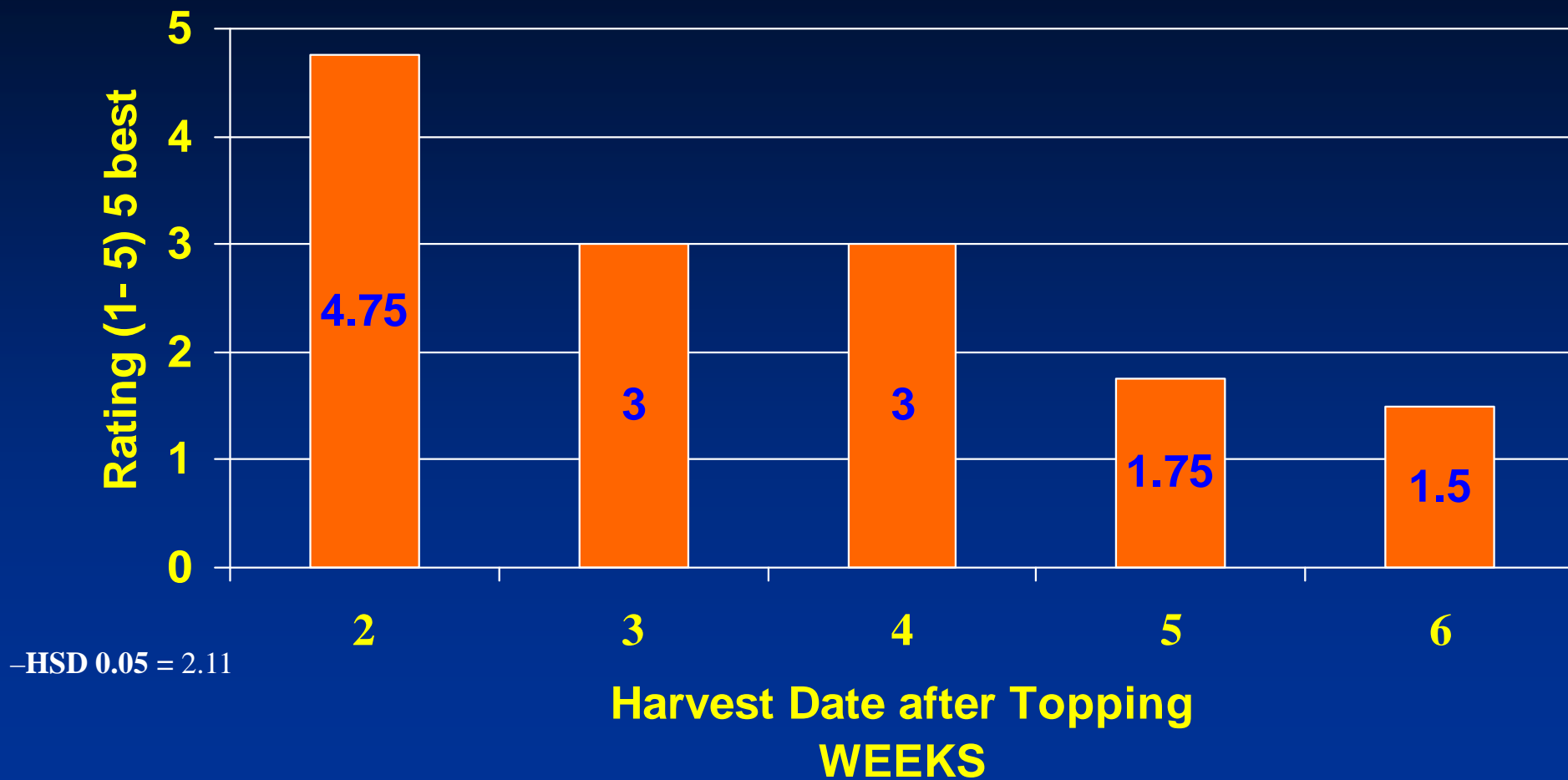
# Effects of Leaf Number and Harvest Date on Burley Tobacco Quality

## Trimble Co. – Terry Tilley Farm

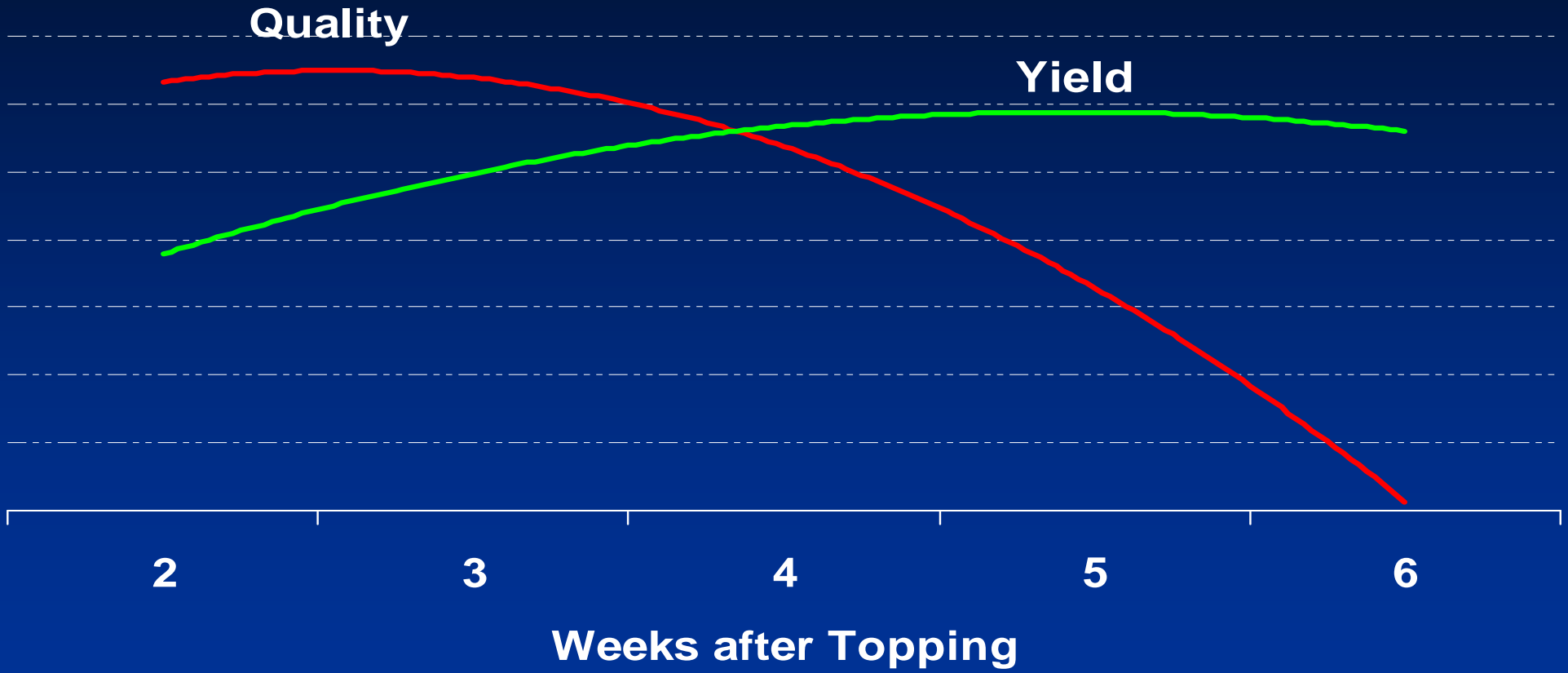
Leaf Number	Harvest Date After Topping	Bottom Grade/ Price	Second Grade/ Price	Third Grade/ Price	Top Grade/ Price
20	4 weeks	X3F \$1.93	B3F \$1.96	B4K \$1.48	B4FR \$2.00
20	6 weeks	C4V \$1.80	B4VF \$1.76	B4VF \$1.76	B4K \$1.48
24	4 weeks	C4F \$1.93	B4F \$1.96	B3F \$1.96	T4FR \$2.08
24	6 weeks	C4V \$1.80	B4K \$1.48	B4F \$1.96	T4FR \$2.08

**–Price is based on Price Support**

# Effects of Harvest Date on Quality in Jackson Co. - 2000



# Effects of Harvest Date on Yield and Quality



# Objective

To determine the effect of nitrogen rate and harvest date and the yield and TSNA levels of burley tobacco.



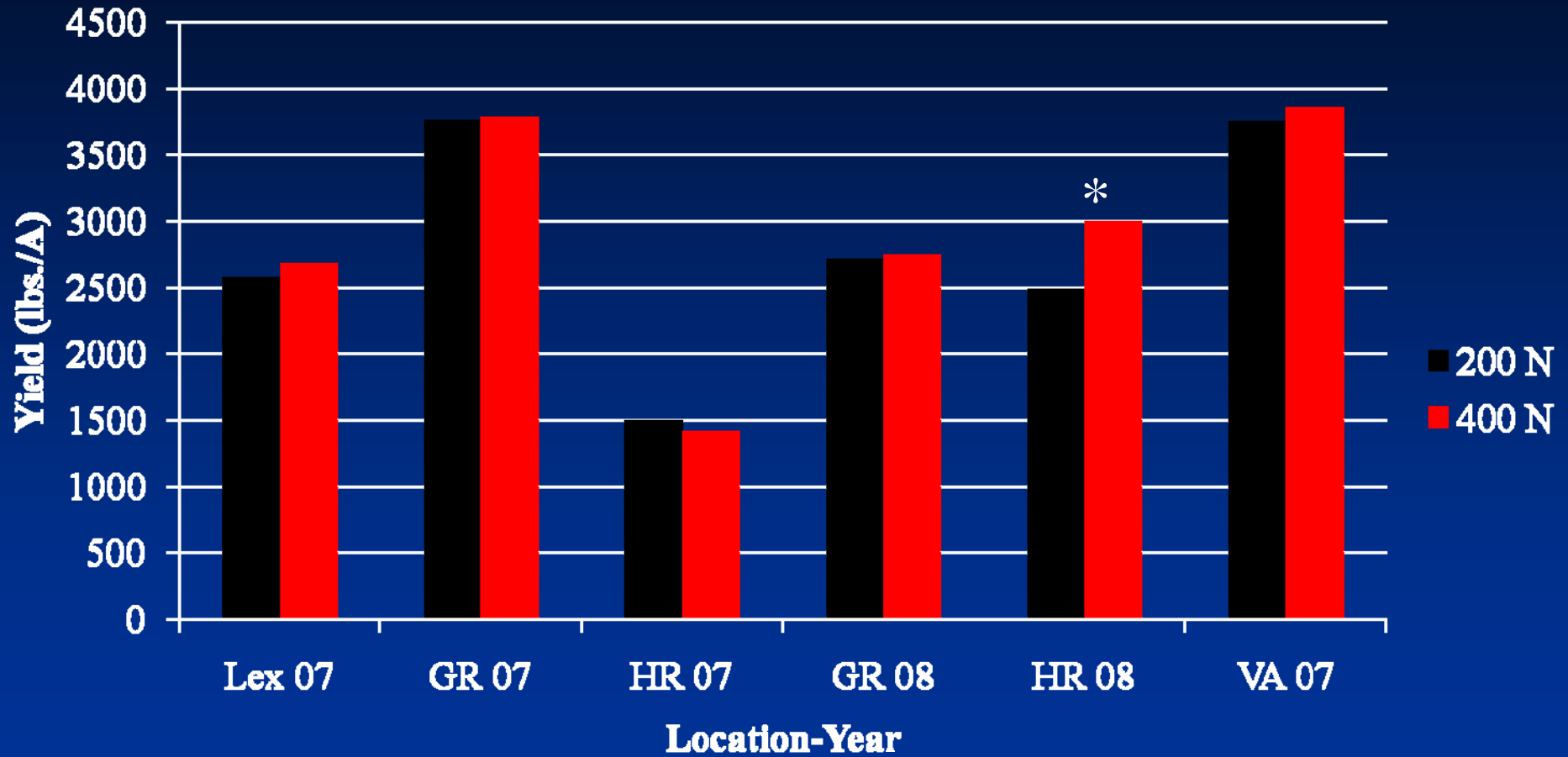
# Methods

- Two rates of nitrogen
  - 200 lbs./A (224 kg/ha)
  - 400 lbs./A (448 kg/ha)
- Four harvest times
  - 20 days after topping
  - 30 days after topping
  - 40 days after topping
  - 50 days after topping
- Variety KT 204 LC
  - All locations used seed from the same lot

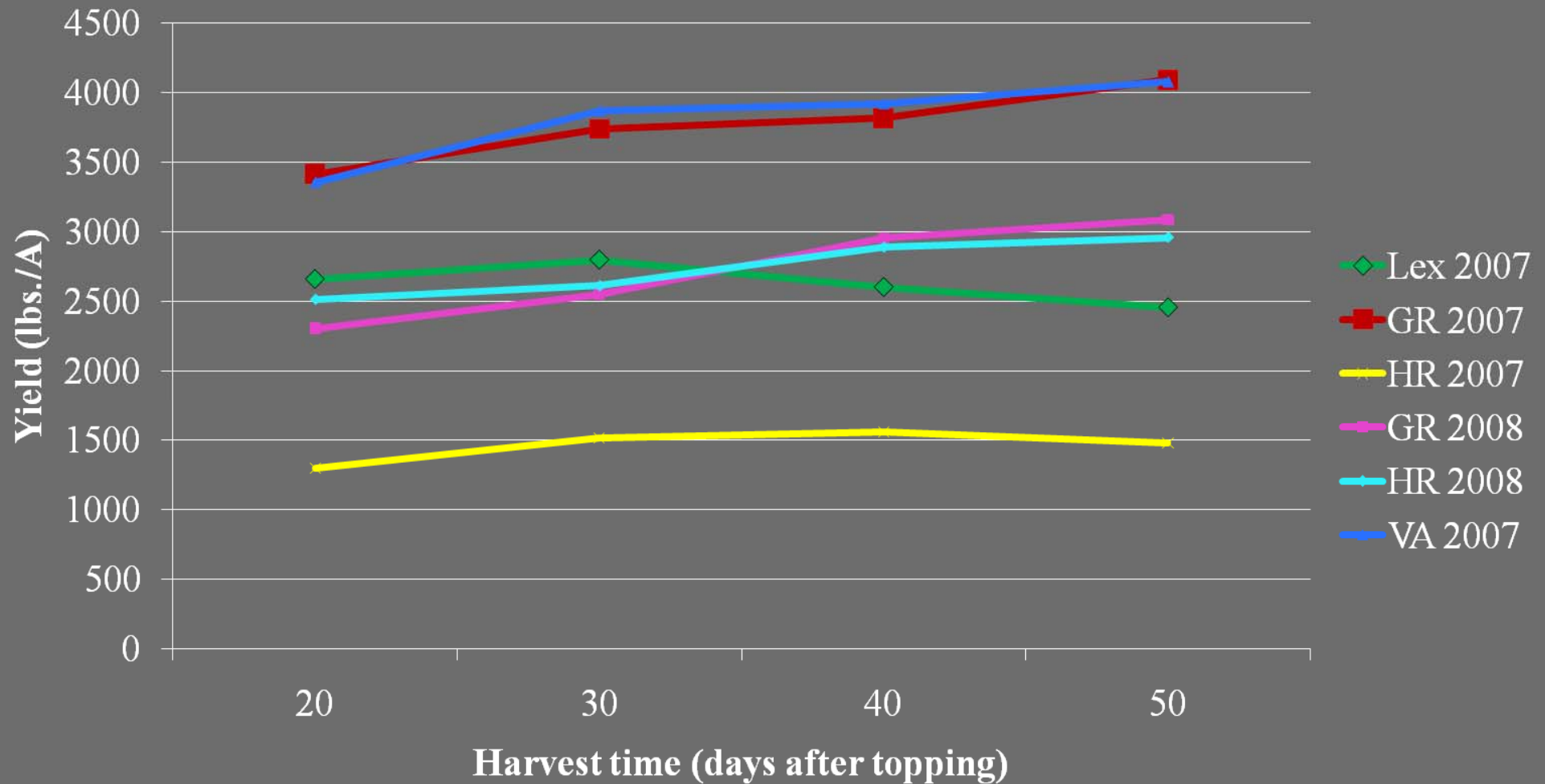
# Locations

State	Location	Cooperator
Kentucky	Woodford County	Palmer/Pearce
Tennessee	Greenville	Denton
Tennessee	Highland Rim	Denton
Virginia		Peek
Virginia		Reed
North Carolina		Fisher
Maryland		Conrad

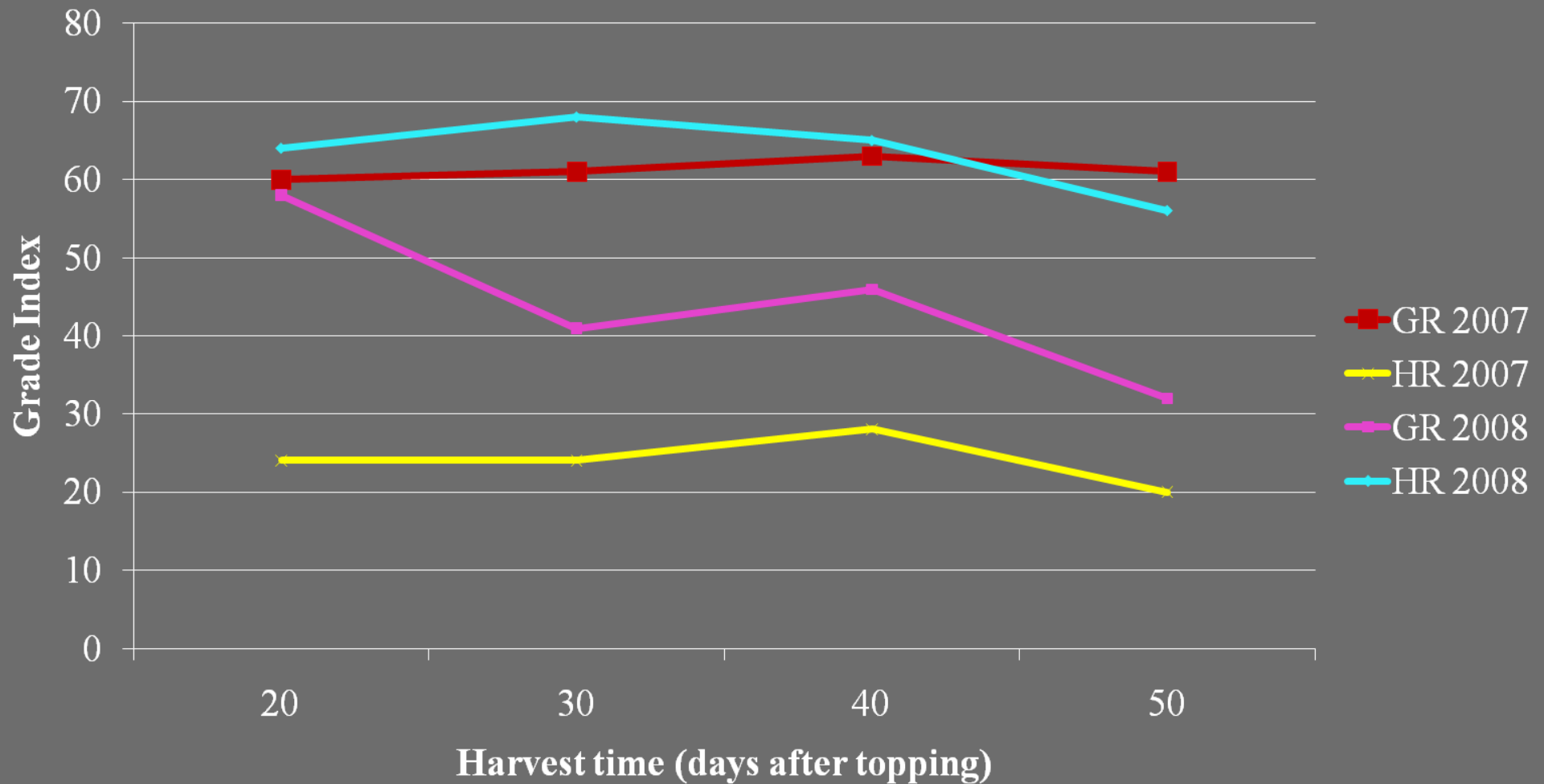
# Effect of nitrogen rate on yield



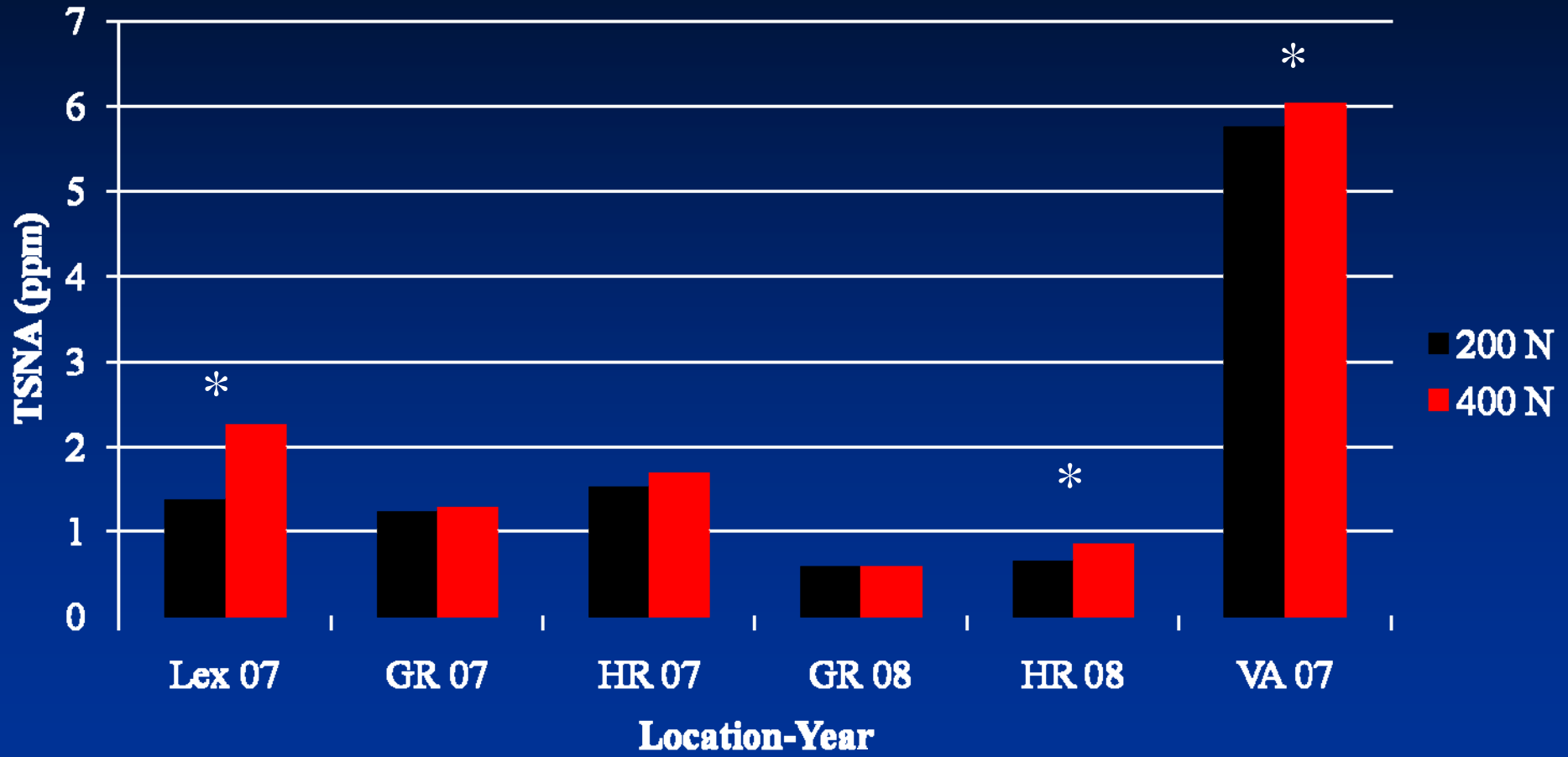
# Effect of harvest time on yield



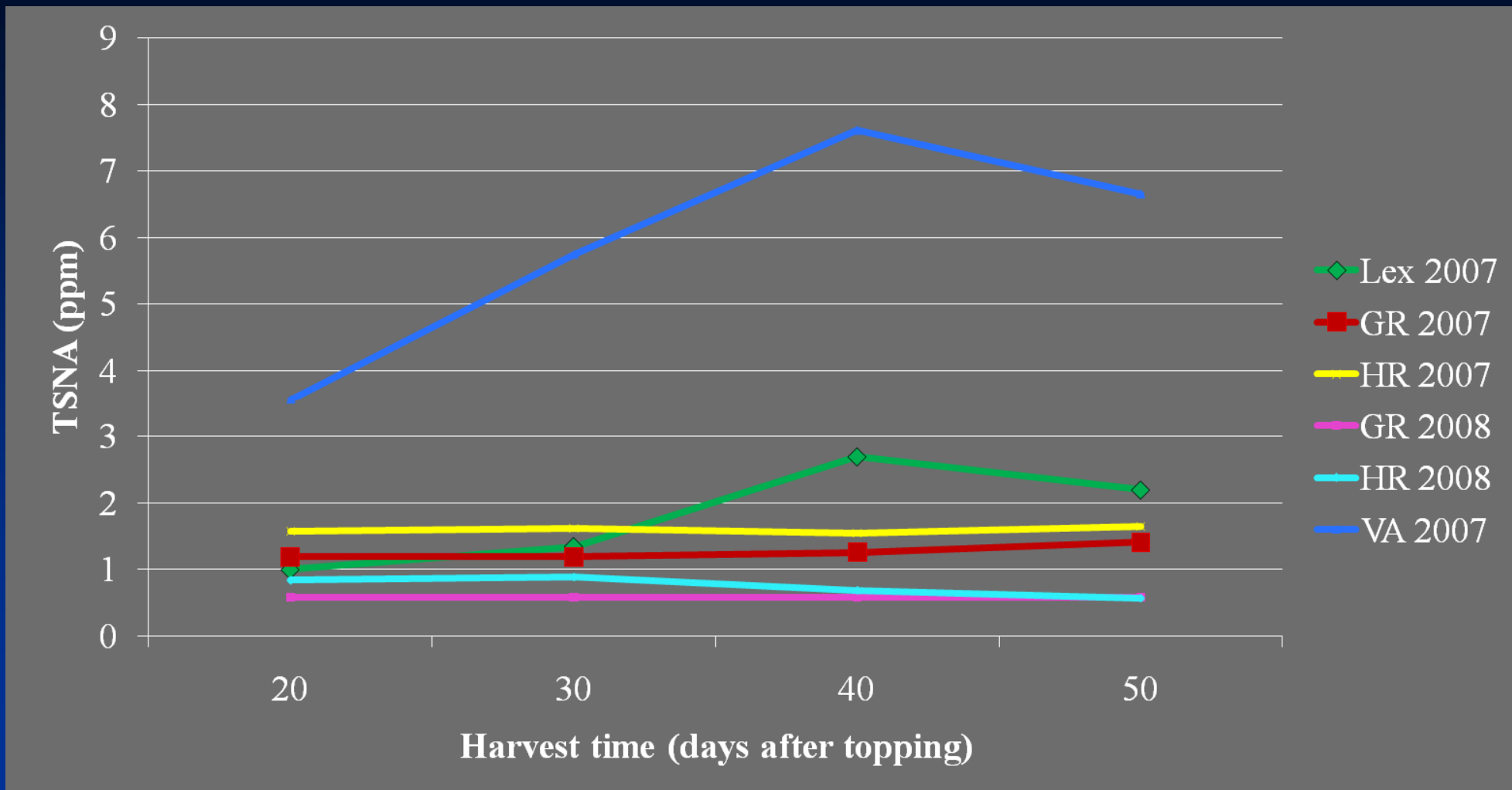
# Effect of harvest time on grade index



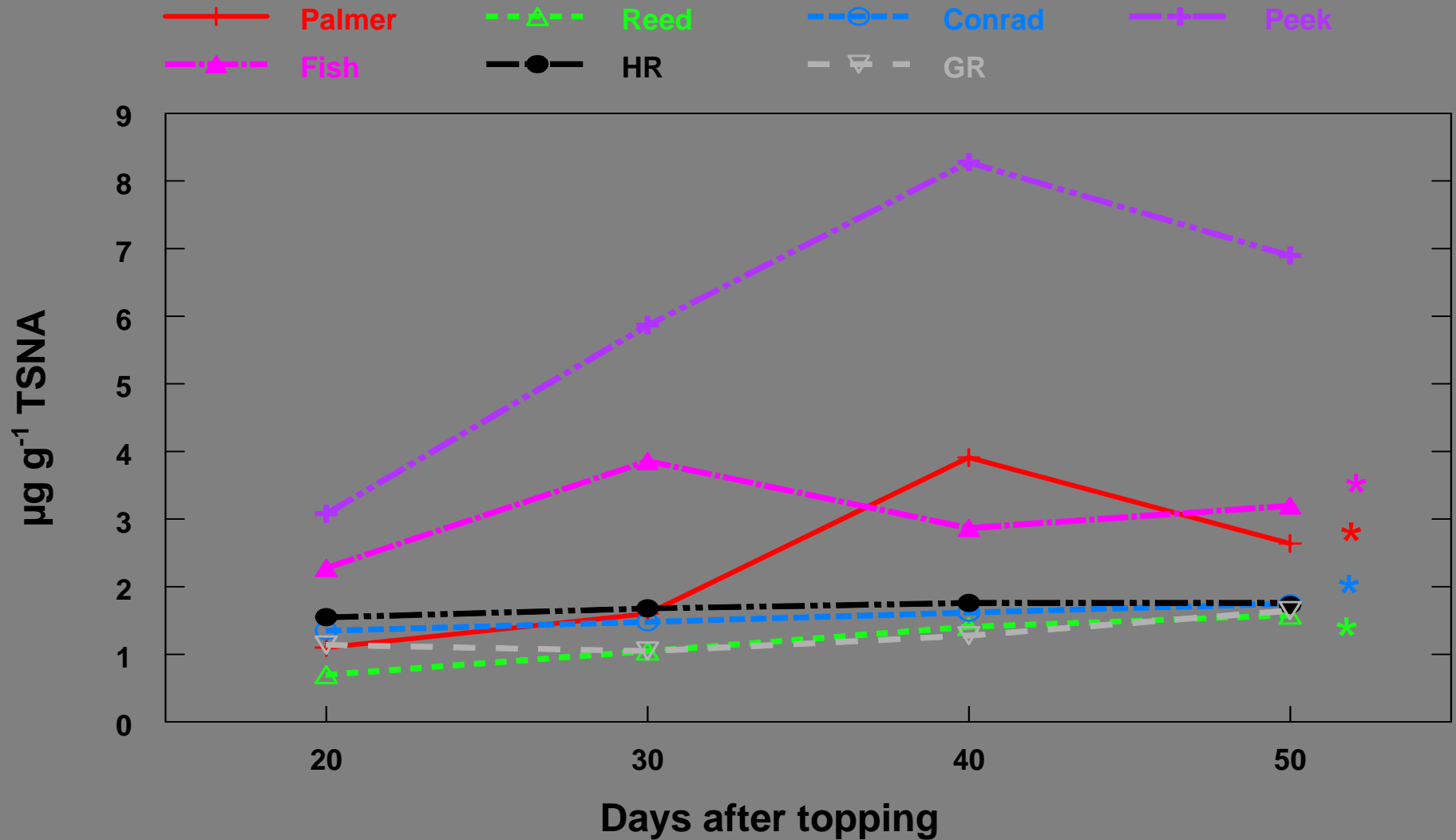
# Effect of nitrogen rate on TSNA level



# Effect of harvest time on TSNA level



# TSNA response to Days after topping locations with 400 N - 2007







# Conclusions

- Nitrogen rate
  - Minimal effect on yield in the range tested
  - No impact on quality
  - Increased TSNA at some locations/years
- Harvest time
  - Location interactions
  - Yield increased in some decreased in others
  - Quality either did change or decreased with later harvest
  - TSNA tended to increase or stay the same with later harvest