

Cultural Practices Update



Paul White and Chuck Webber

***With the assistance and guidance of Ryan Viator
USDA-ARS Sugarcane Research Unit, Houma, LA**

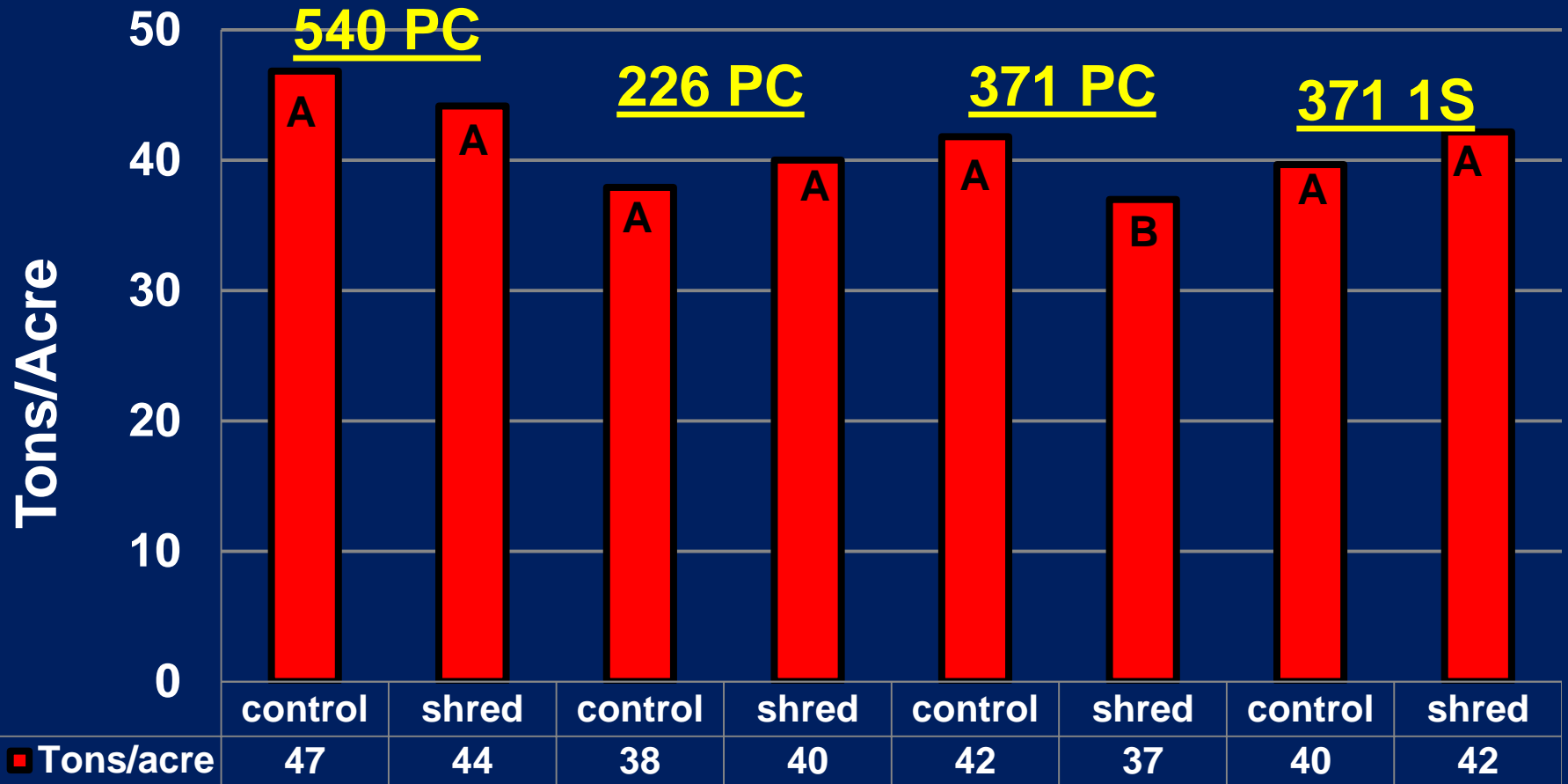
Shred Tests

- **Shred vs. not shredding (540, 371, 226).**
- **High shred vs. low shred (226).**
- **High shredding and burning (226).**



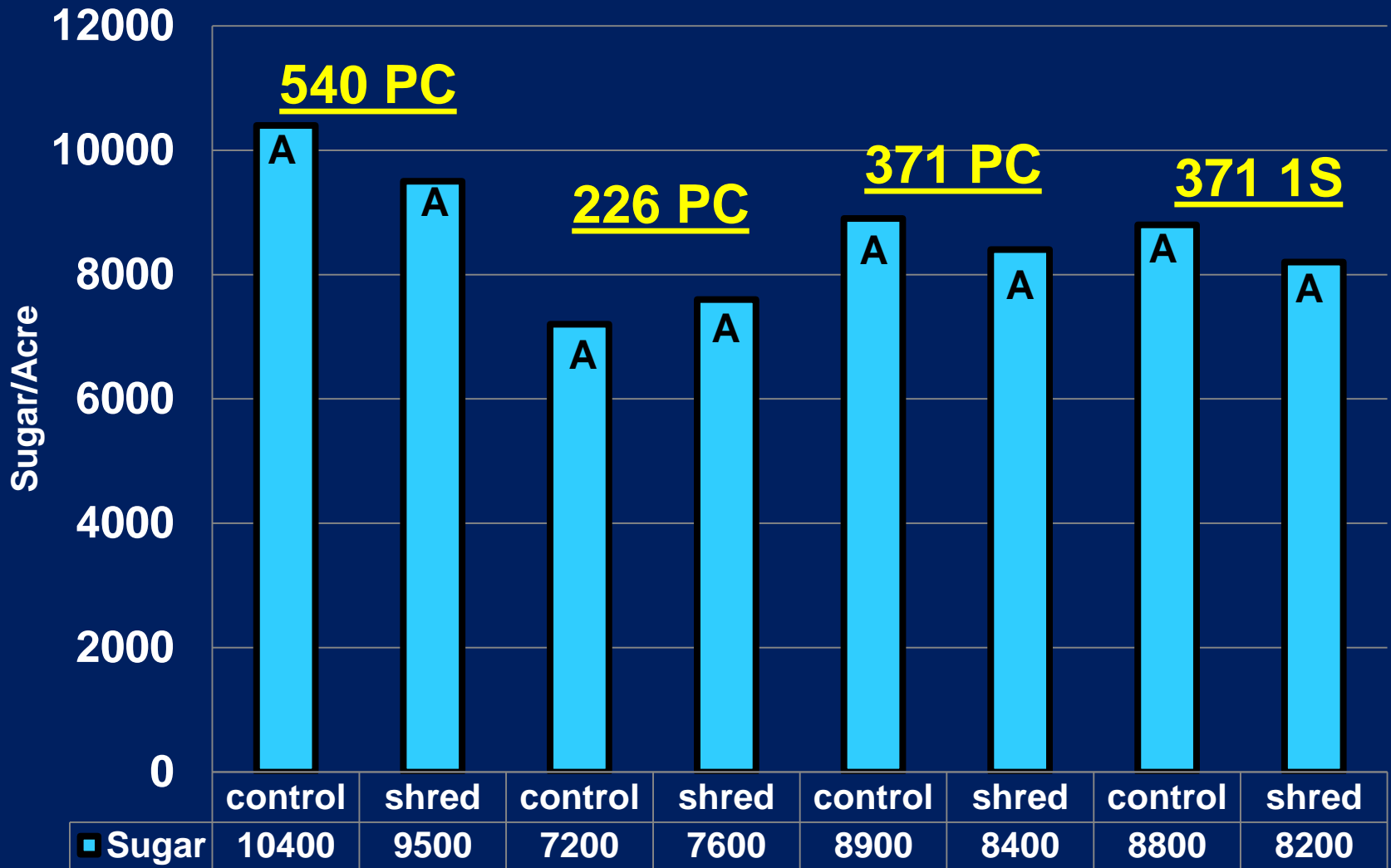
Shred vs. not shredding

P<0.05



Shred vs. not shredding

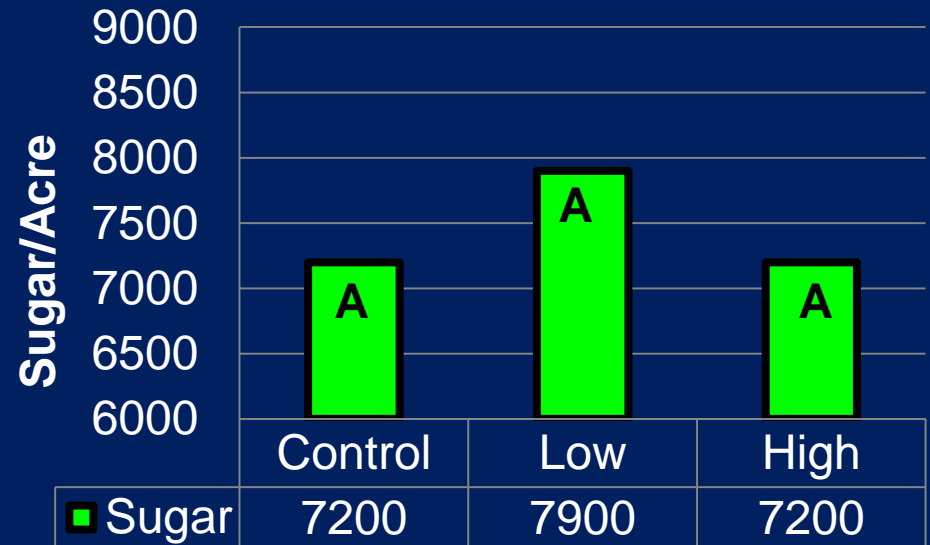
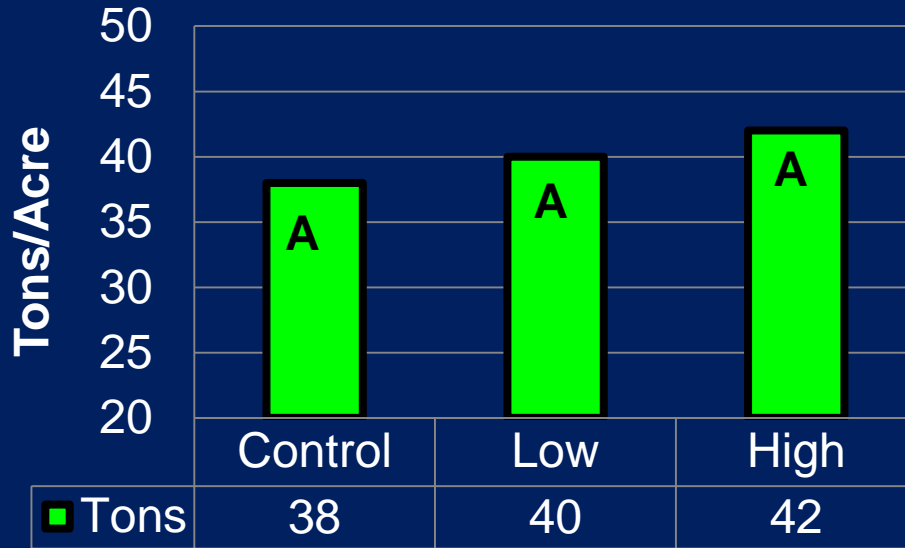
P<0.05



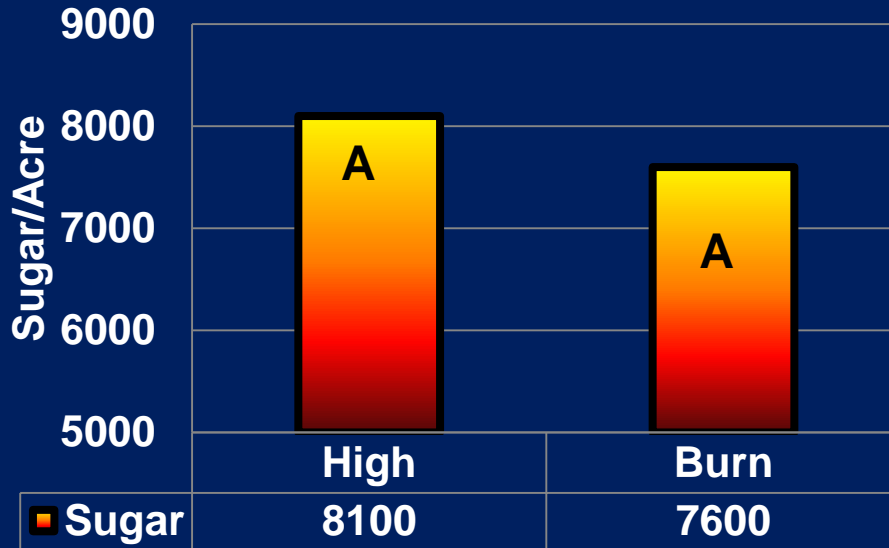
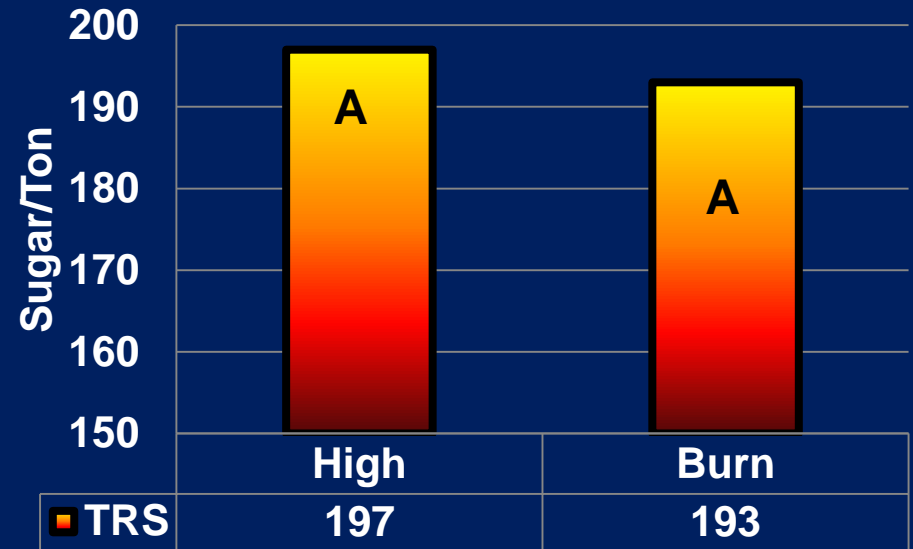
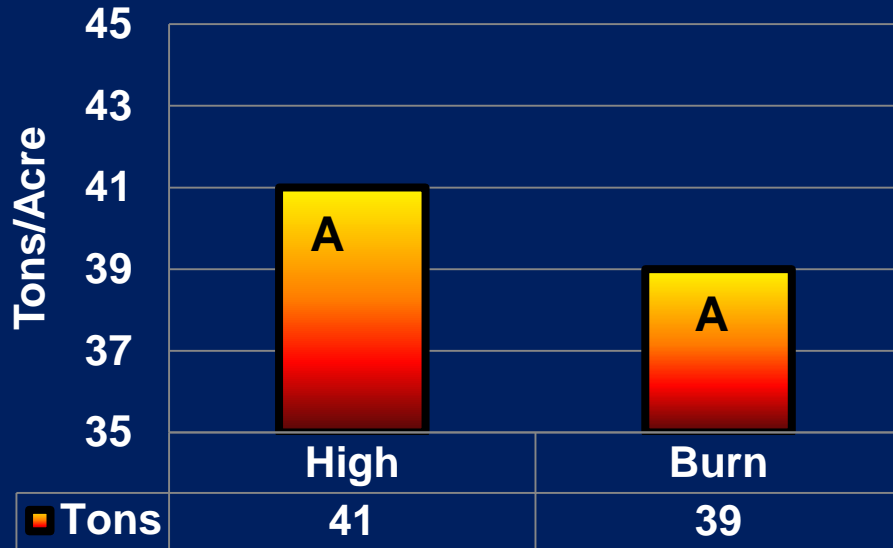


High vs. Low Shred (226)

P<0.05



High Shred Burn vs. No Burn (226)



Shredding Summary

- **Shredding did not reduce yields significantly for 540 or 226 but did lower tons for PC 371.**
- **High or low shredding were similar for 226.**
- **Burning following high shredding (226) produced similar results in tons and sugar.**

Residue Management

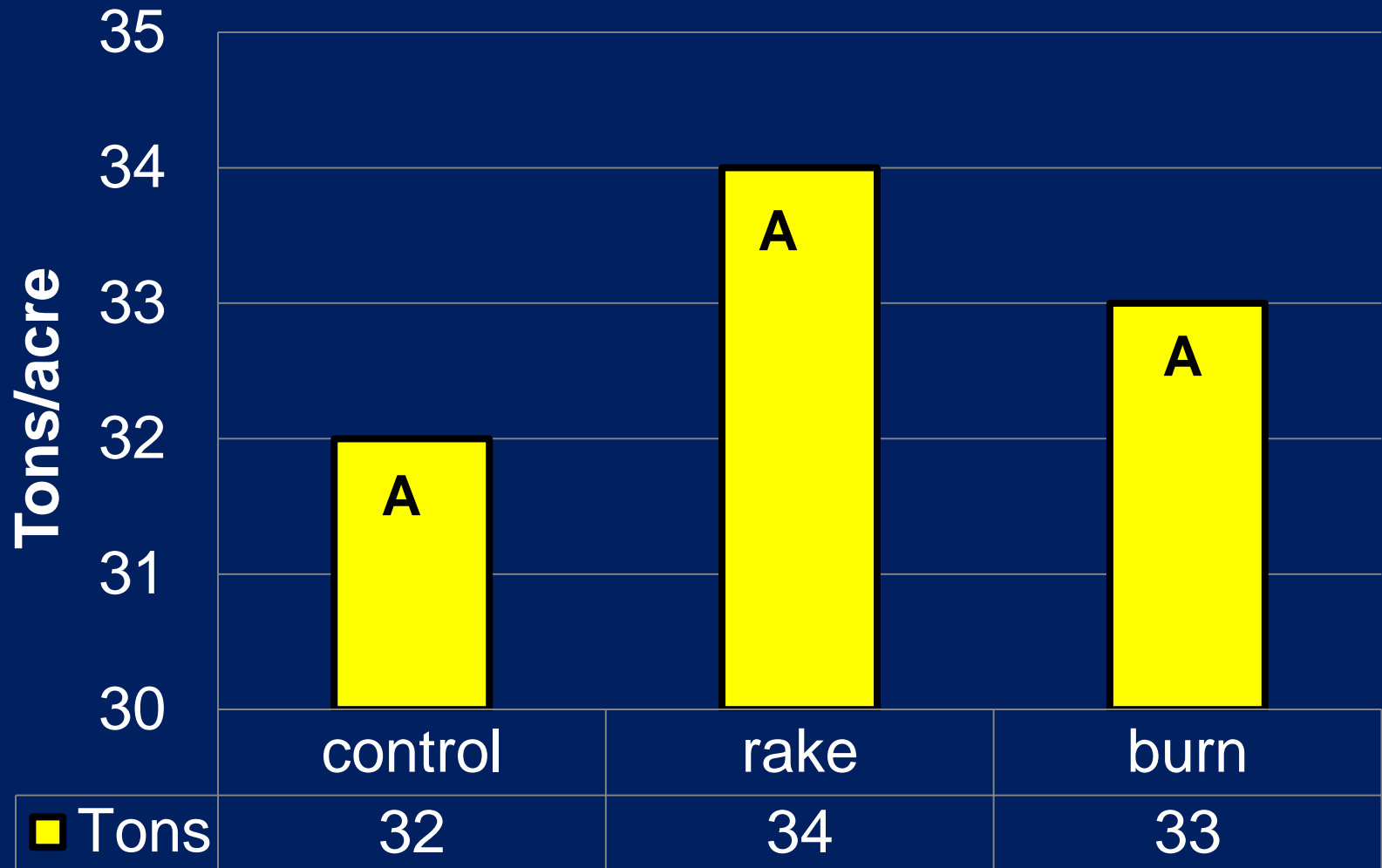
- **1st stubble 838.**
- **Full retention, rake, burn.**



Residue Management

P<0.05

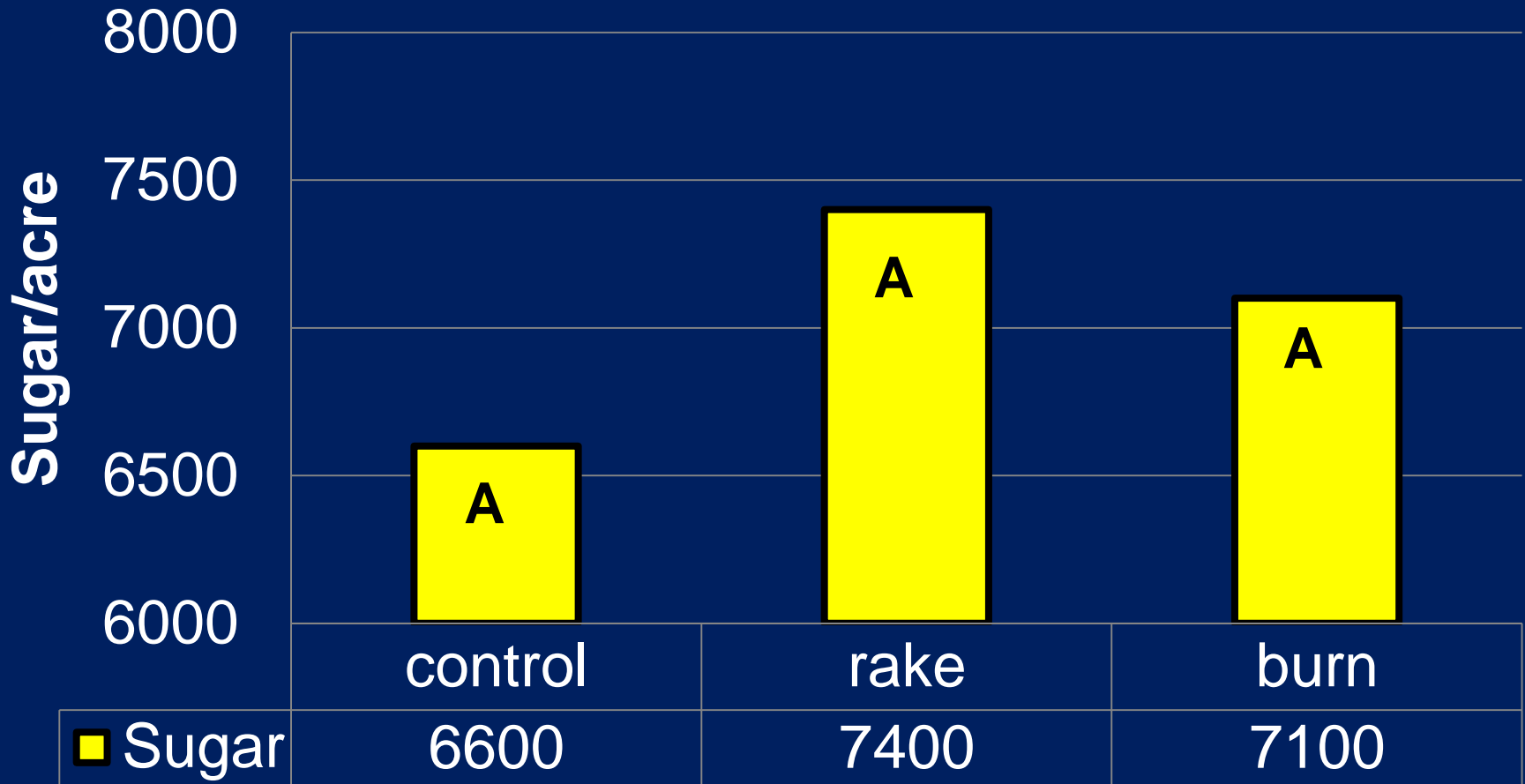
838 1st stubble



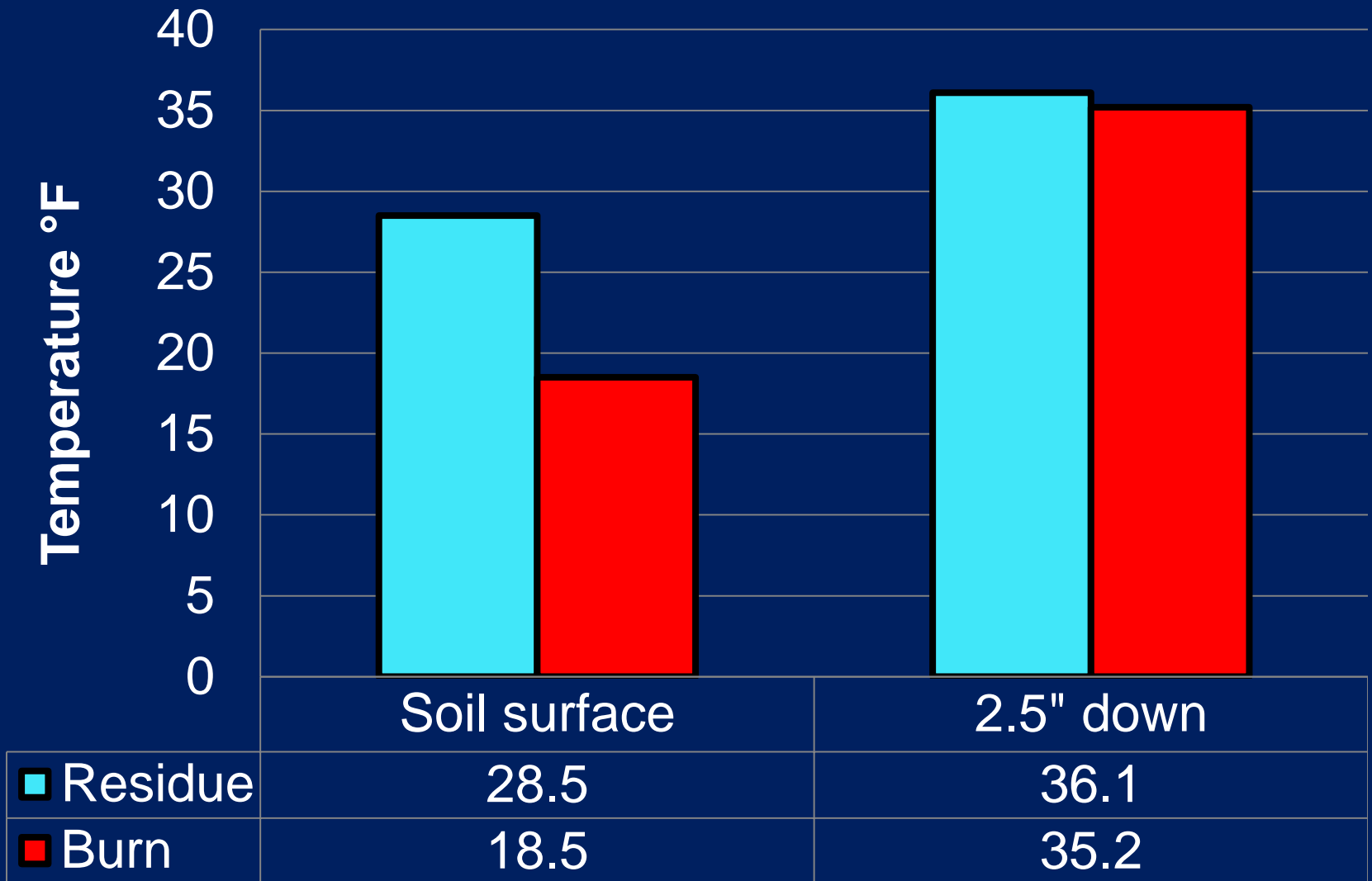
Residue Management

P<0.05

838 1st stubble



January 29-30th, 2014, Schriever (Air temp low 20.6 °F, wind chill 13.0 °F)



Residue Management Summary

- **Gains of 300-800 lbs. Sugar/Acre were made by raking or burning.**
- **Raking has advantage of preserving soil organic matter.**
- **Residue may provide some insurance against freeze.**



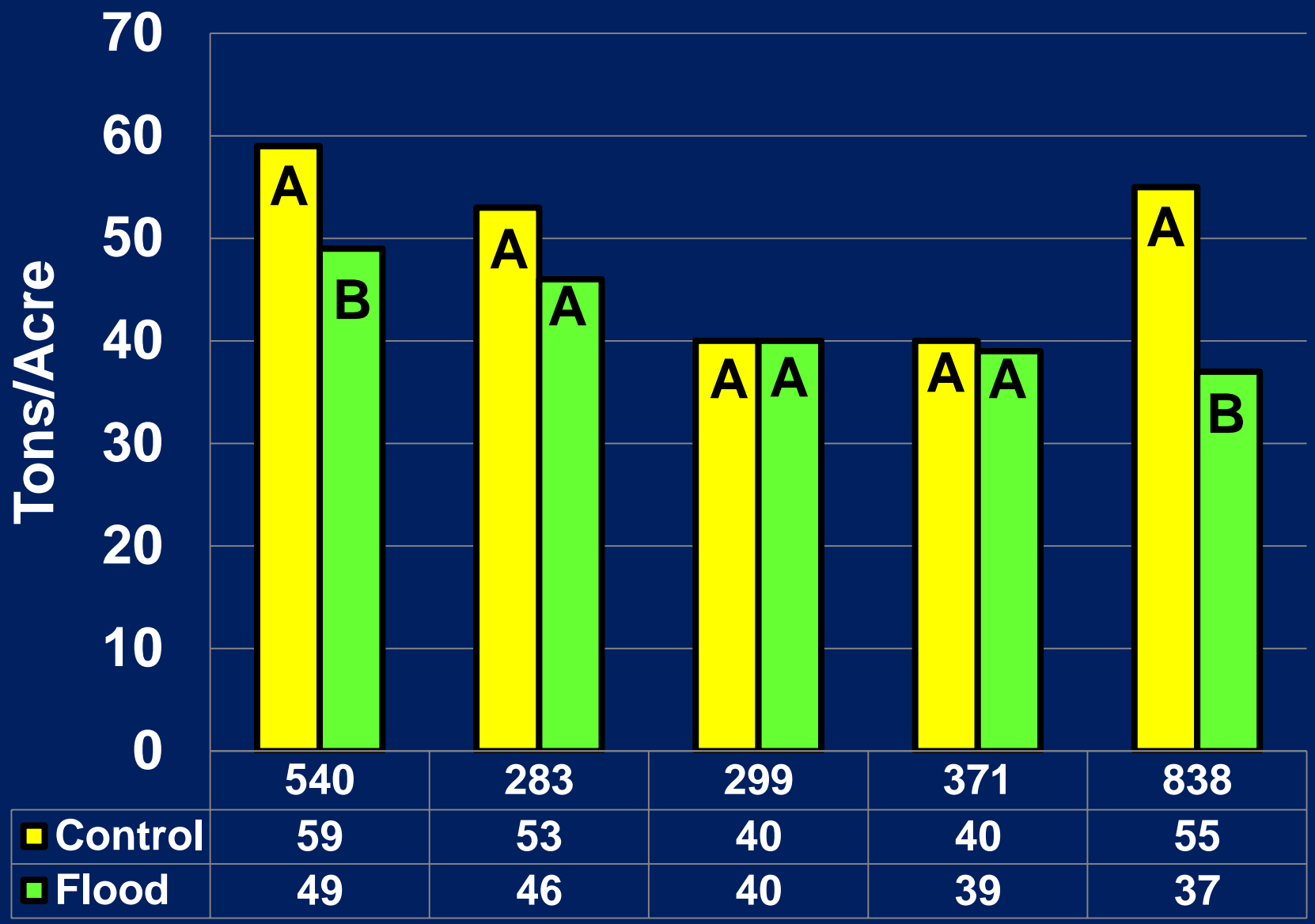


Flood Test in Plant Cane

- Galliano in a heavy muck soil.
- Commercials tested: 540, 283, 299, 371, and 838.
- Half of plots flooded for 1-2 weeks/month from April to Sept.

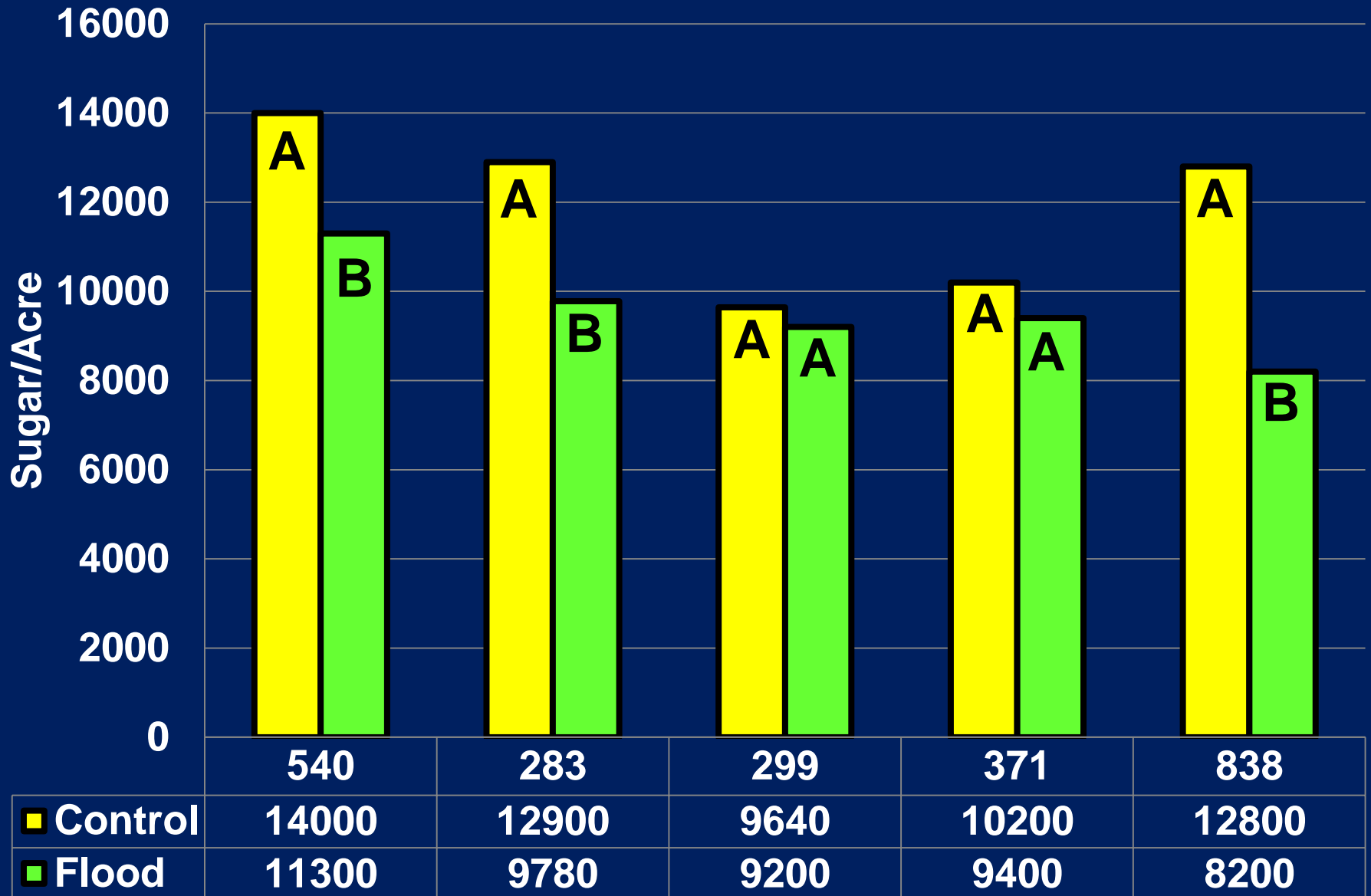
Tonnage

$P \leq 0.05$



Sugar

$P \leq 0.05$



Flood Test Summary

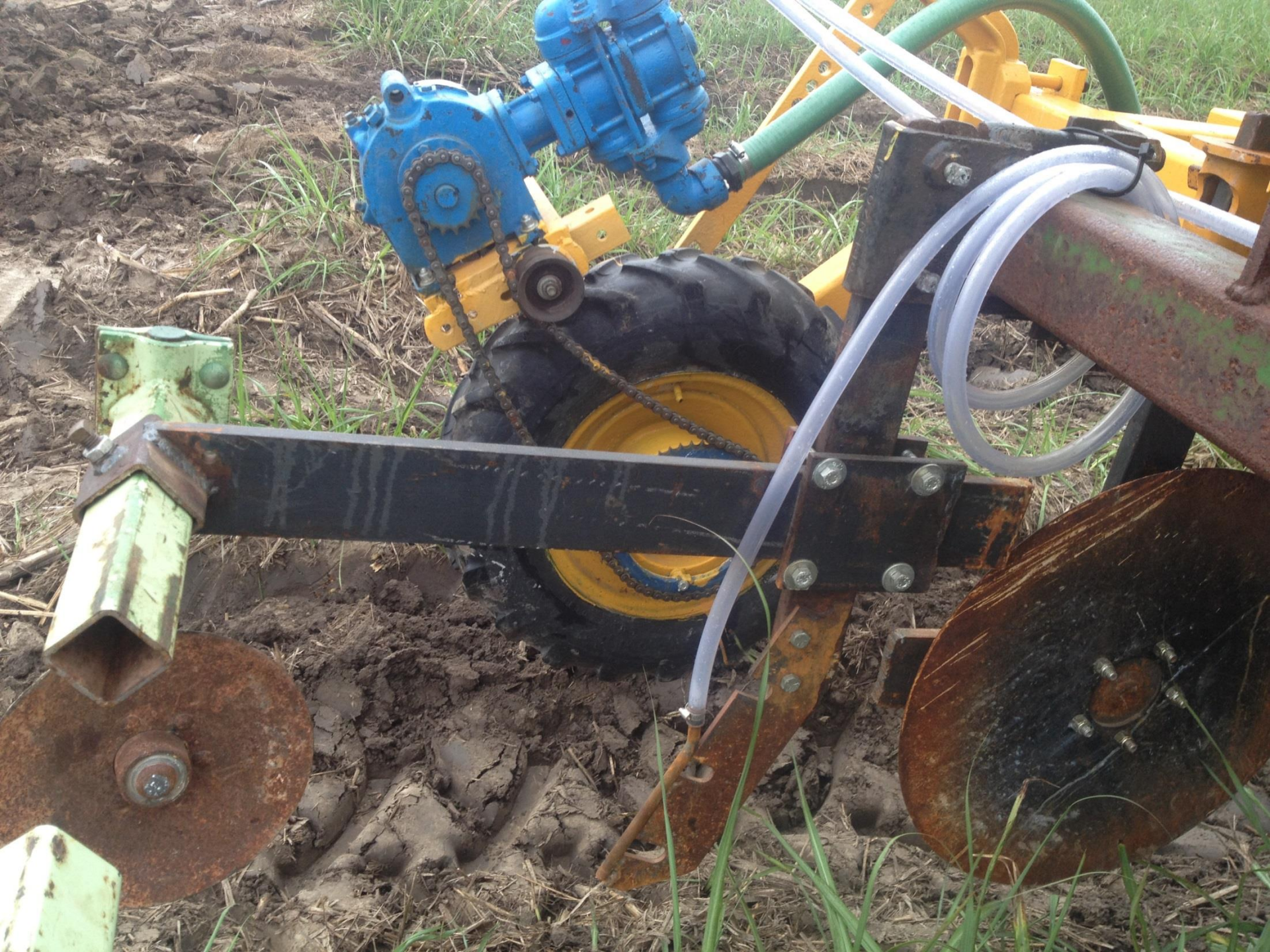
- Clean drains as soon as possible to lessen effects of wet field conditions.
- 540, 283, and 838 especially do not like wet feet.
- 299 and 371 less affected by flooding and may be better choices in back fields.

“No-till” Fertilizer Test

- **Similar to Australian fertilizer methods.**
- **Knife in fertilizer without off-baring block.**
- **Compare with off-bar, knife fertilizer, cultivate.**
- **226 Plant Cane and 1st stubble.**





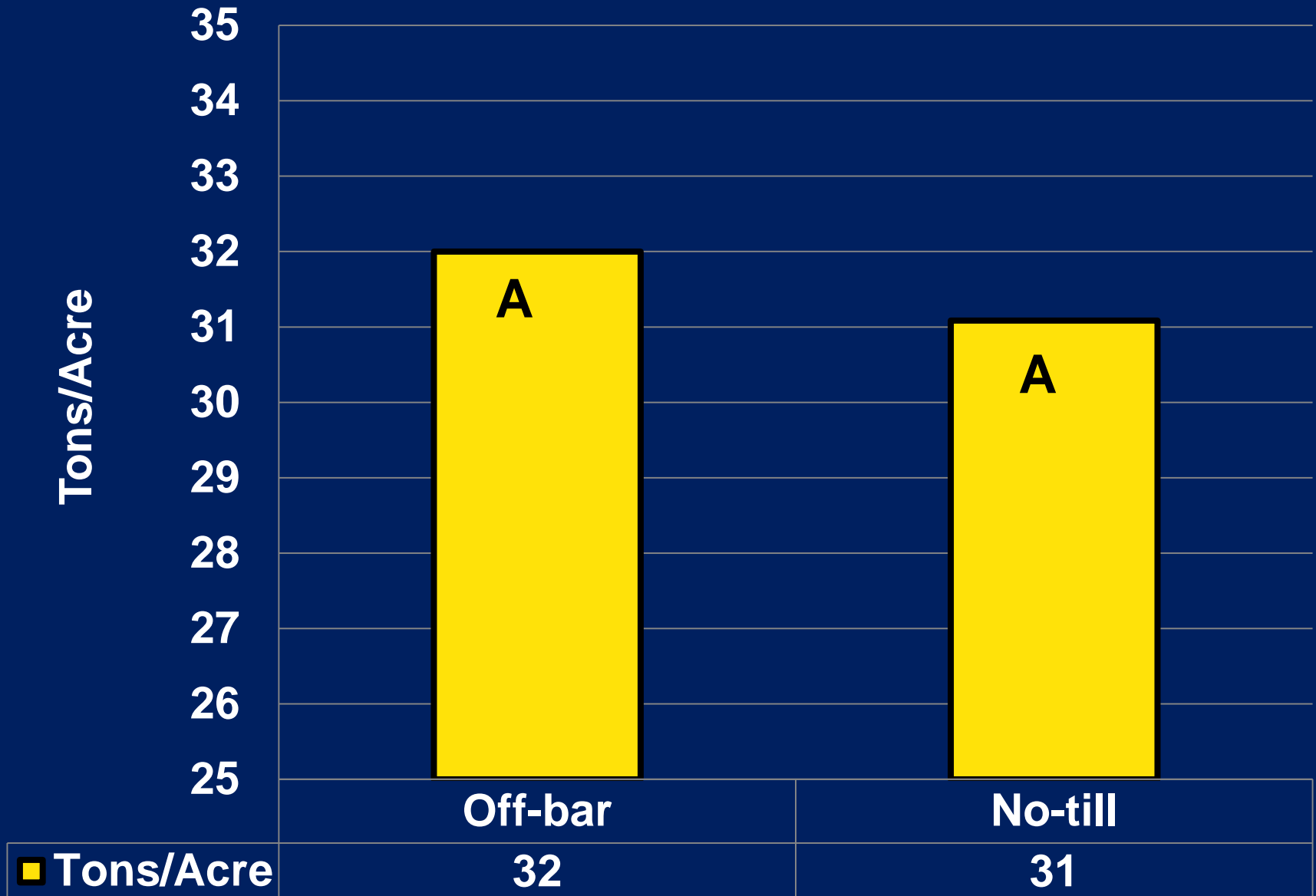






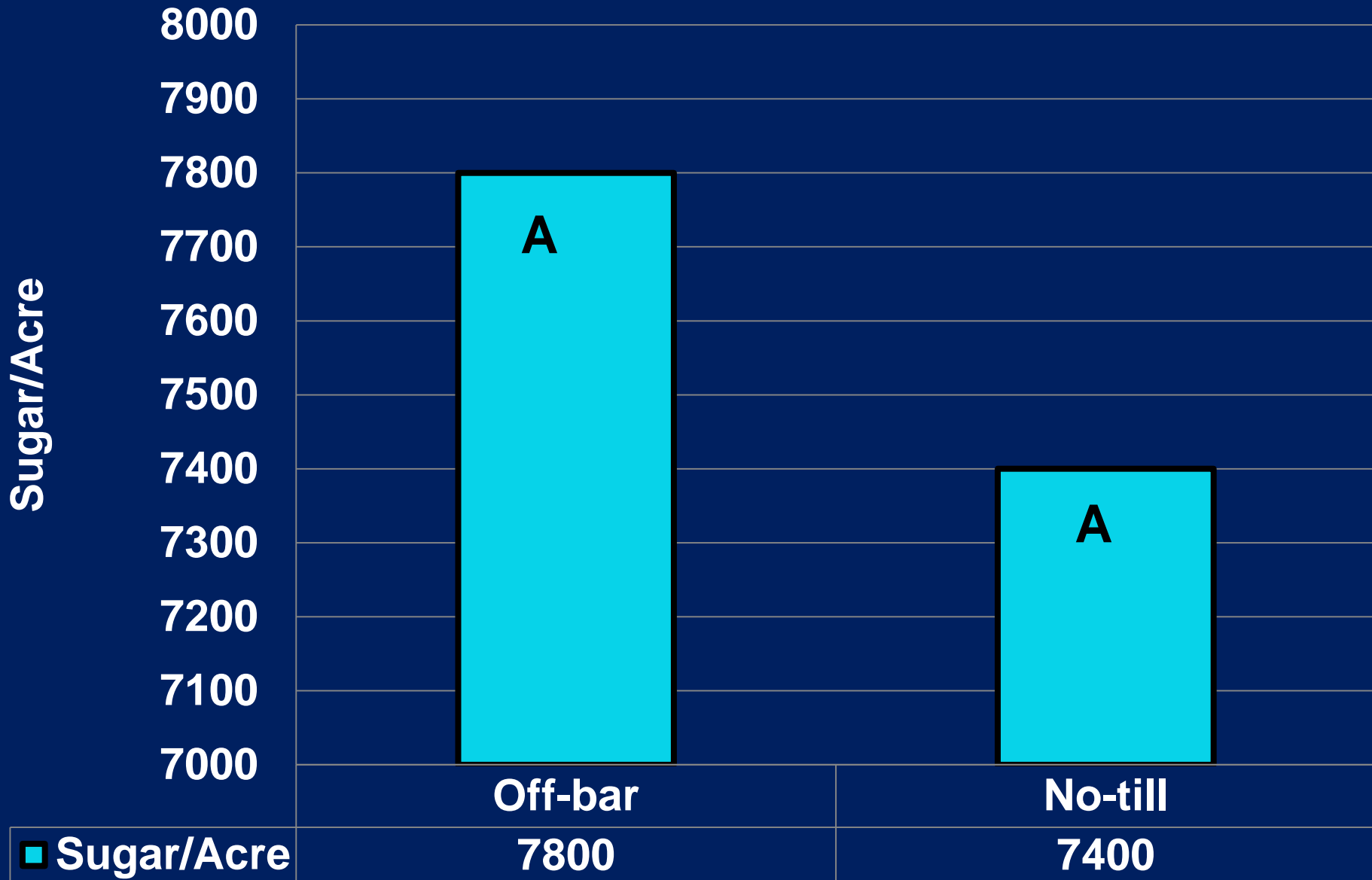
226 – Plant Cane Tonnage

$P \leq 0.05$

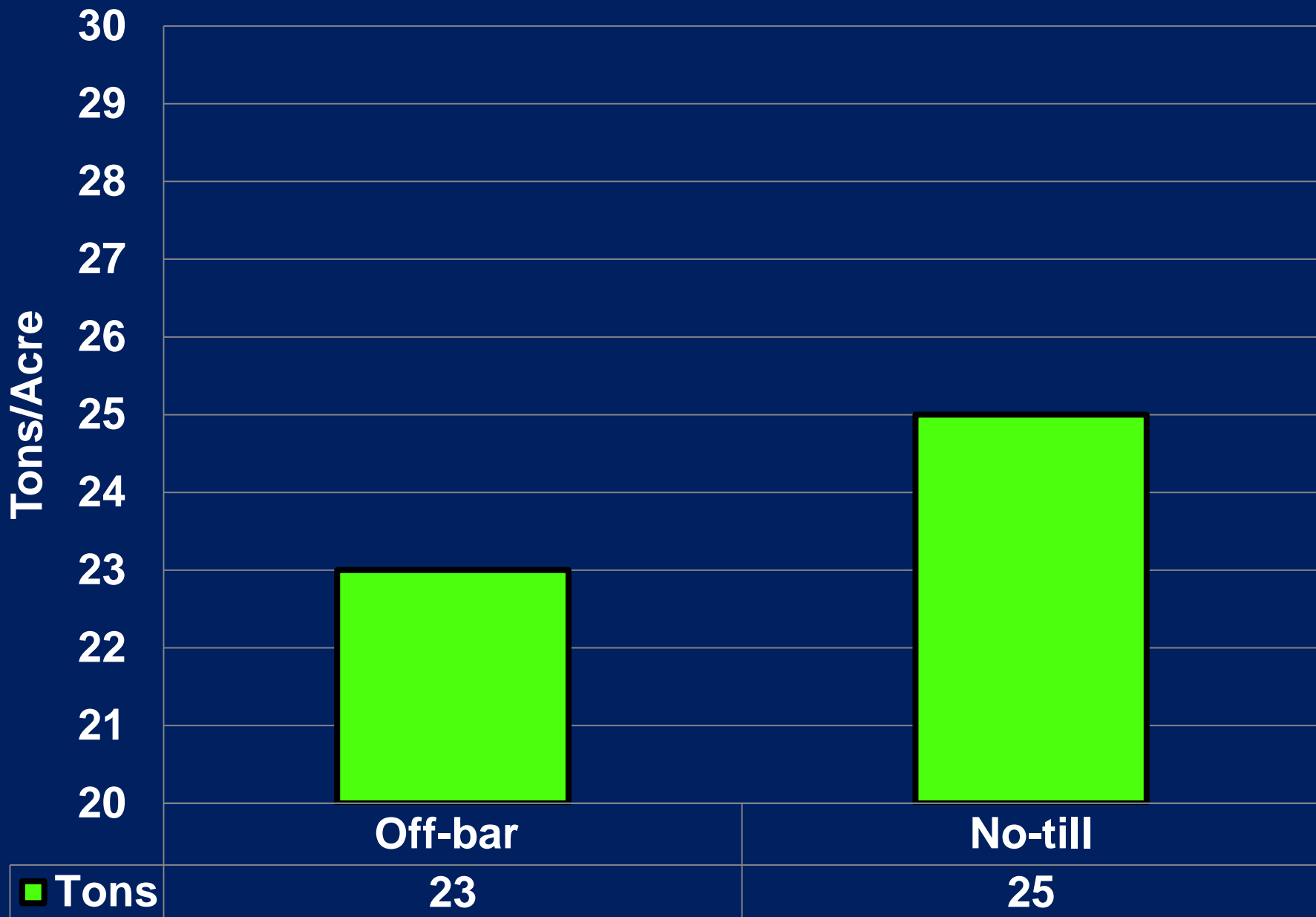


226 - Sugar

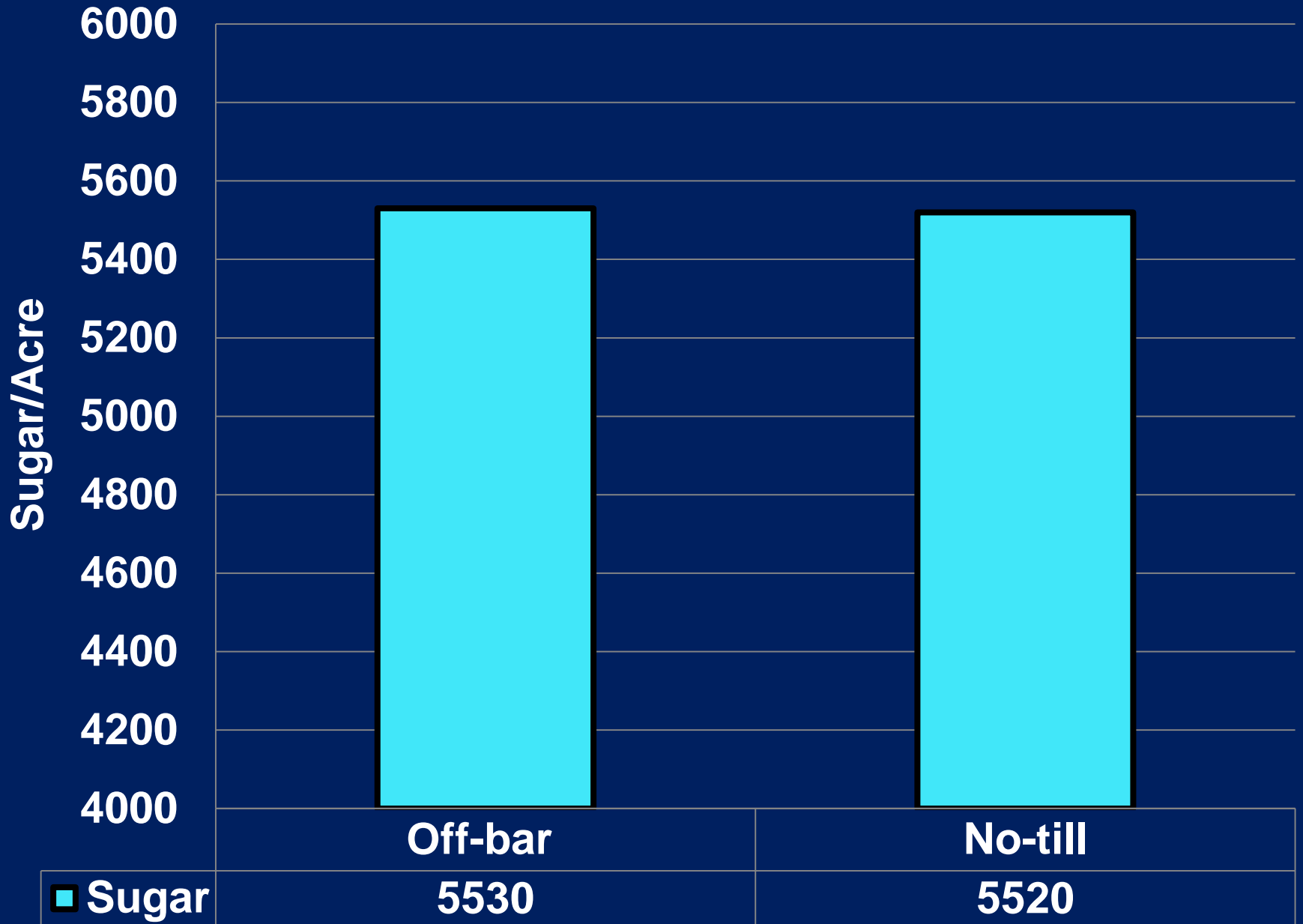
$P \leq 0.05$



226 – 1st Stubble – Tonnage (Direct Haul)



226 – 1st Stubble – Sugar (Direct Haul)



No-till Fertilizer Test Summary

- **Similar cane and sugar yields between off-bar and no-till.**
- **Price of sugar, price of diesel may make no-till more feasible.**

Plene Planting Test

Syngenta
LSU
Growers



Plene (Latin) = Complete, Total, Fully, Wholly/Entire
Complete Planting System =
Eye-Pieces, Insecticide, and Fungicides

Plene Planting Test (4 Systems x 3 Varieties)

1. Standard Whole Stalk Planting (3 and a lap).
2. Planting Billets (cut with chopper harvester).
3. Treated Planting Billets (Crusier and Dynasty).

4. Plene Eye-Pieces

Single Eye-Pieces 5 cm long (~2 inches)

Coated with an Insecticide, Crusier (thimethoxam), and Dynasty (3 fungicides = azoxistrobin, fludioxonil, and mefenoxam).

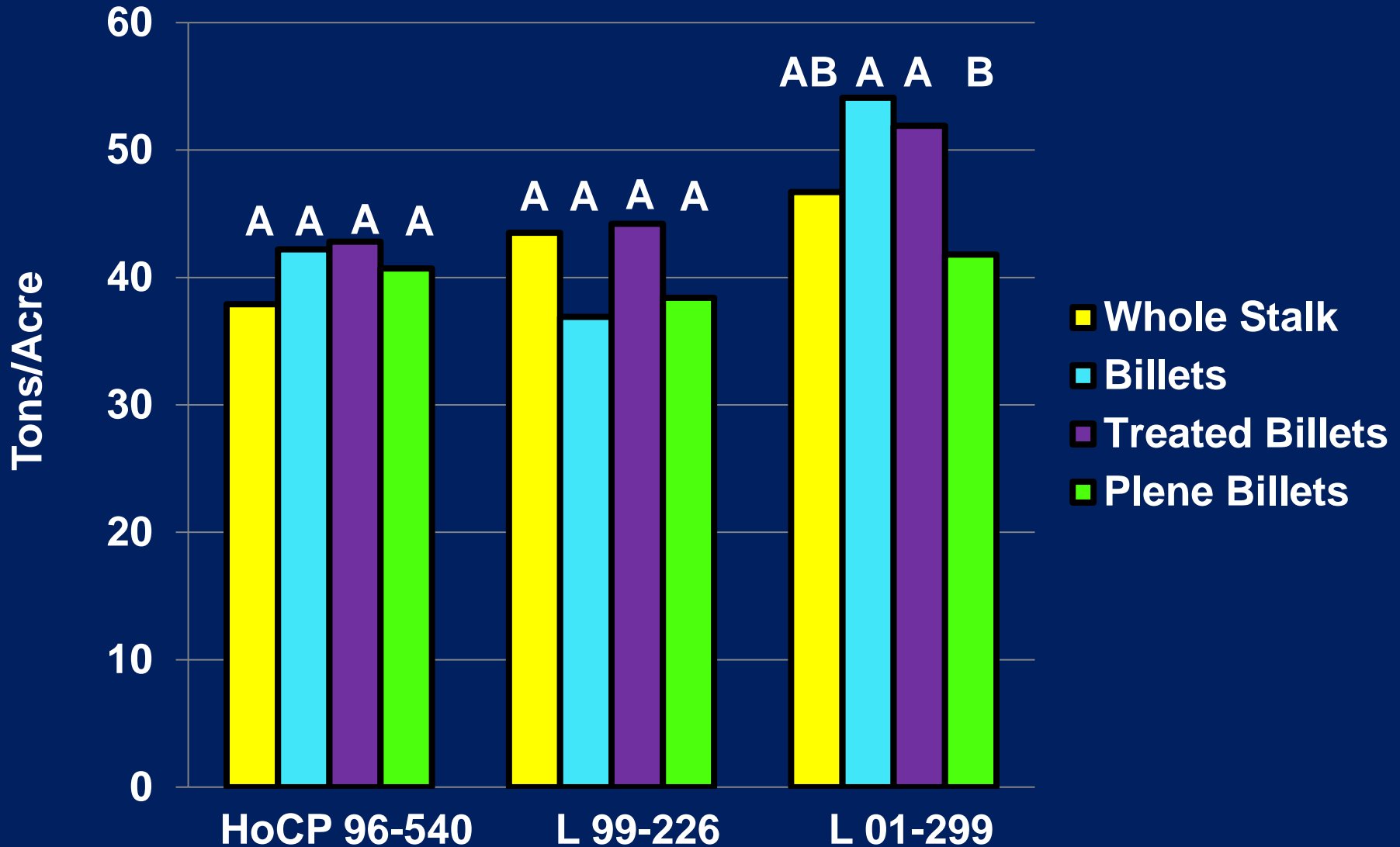
Planted 1 Eye-piece every 10 cm (~4 in.)

x 3 Varieties: HoCP 96-540, L 99-226, & L 01-299

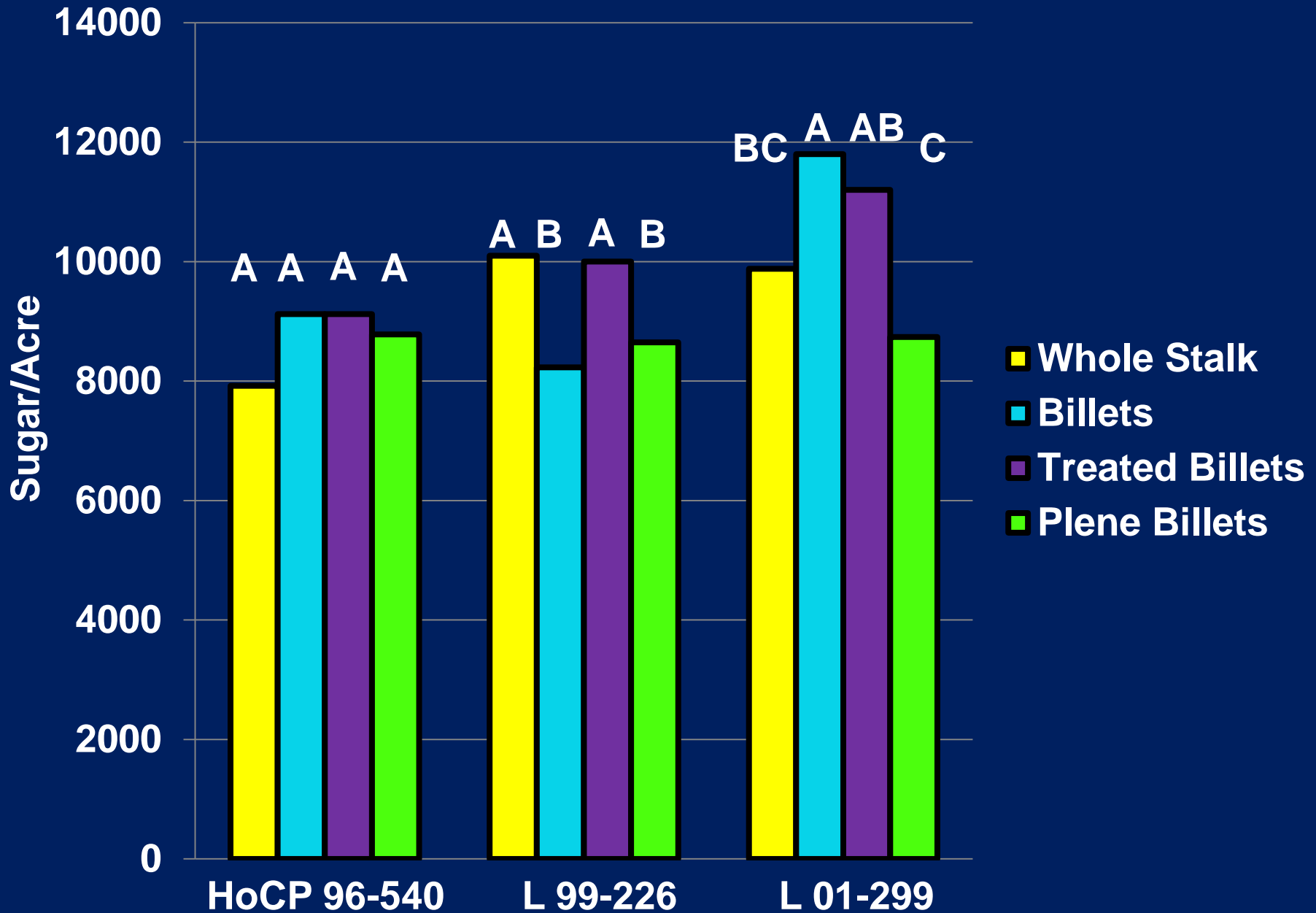


A planter has been developed for Plene billets to reduce equipment weight across the field, decrease labor costs, and increase the planting rate of sugarcane.

Plene Planting Test - Tonnage



Plene Planting Test - Sugar



Plene Planting Test Summary

- **All treatments were similar in 540.**
- **For 226 and 299, treated billets did as well as whole stalk planting.**
- **More testing is needed on planting rate, planting depth, and chemical treatment.**

Overall Summary

- **Limit shredding to high plant cane.**
- **Burn or rake residue after last frost.**
- **Ensure drains and ditches open.**
- **No-Till in spring is a viable option.**
- **Billet planting research coming along.**

Special Thanks to Cooperators

USDA-Sugarcane Research Unit

American Sugar Cane League

A & M Farms

LSU AgCenter

Danny Naquin

Alma Plantation

Syngenta

John Deere

Rodney & Stephen Simoneaux

Blanchard Brothers Farms

Danny Wallet

Duane Viator

Craig Melancon

Ted Broussard

Ronald Hebert

Jim Domingues

