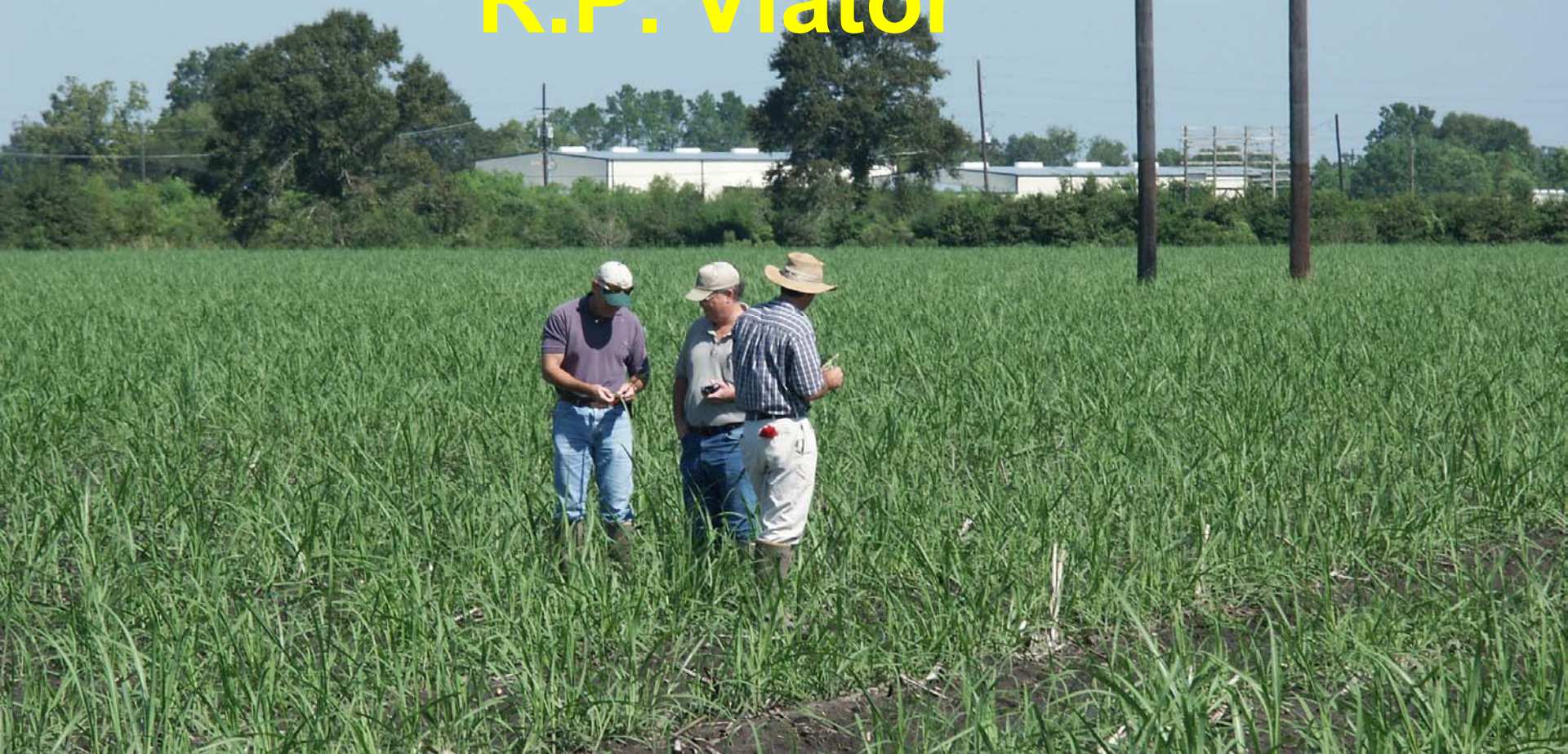


Cultural Practices Update

R.P. Viator



Soil Temperature

A photograph of a field with rows of dark soil and straw mulch, used for soil temperature research. The field is divided into several rows, with the soil appearing dark and the mulch being light brown. In the background, there are utility poles and a clear sky.

-HoCP 96-540

-Burn, brush, full retention

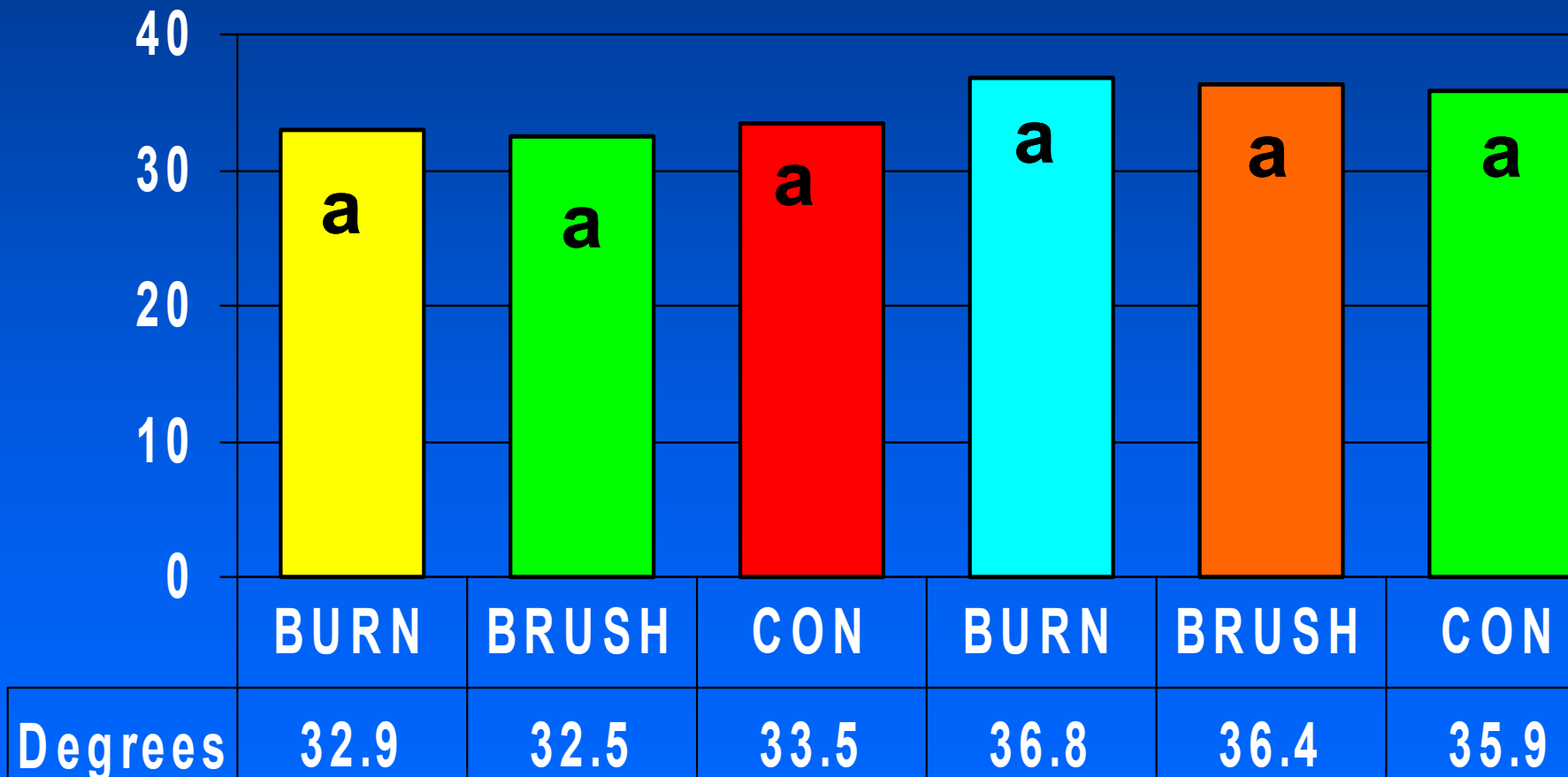
-Temperature sensors at 1 and 4 inches.

2009 Soil temperature

($p < 0.05$)

One inch

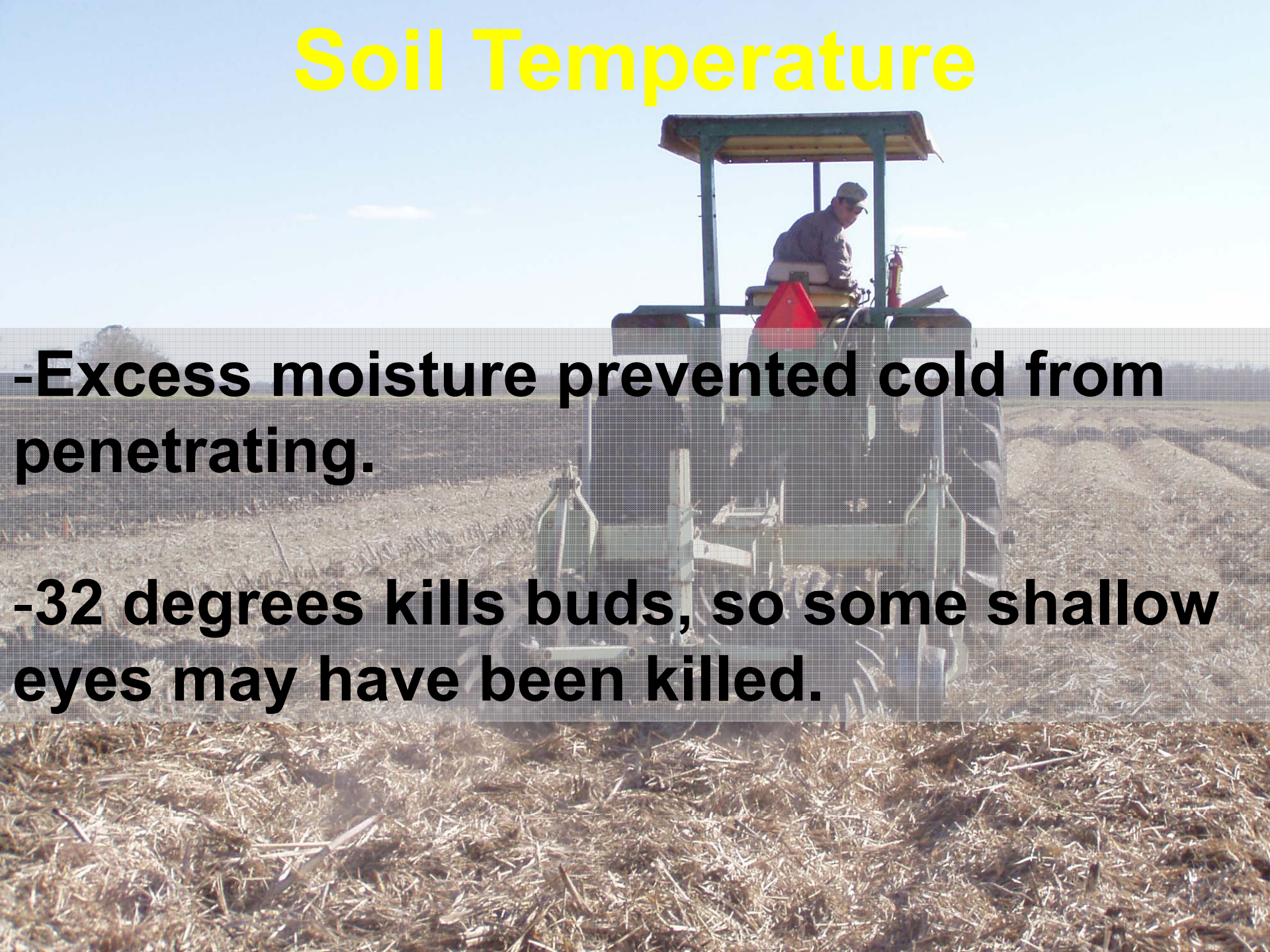
Four inches



Soil Temperature

-Excess moisture prevented cold from penetrating.

-32 degrees kills buds, so some shallow eyes may have been killed.



How do I handle the residue after harvest? Do I have to burn?



Tillage X Residue

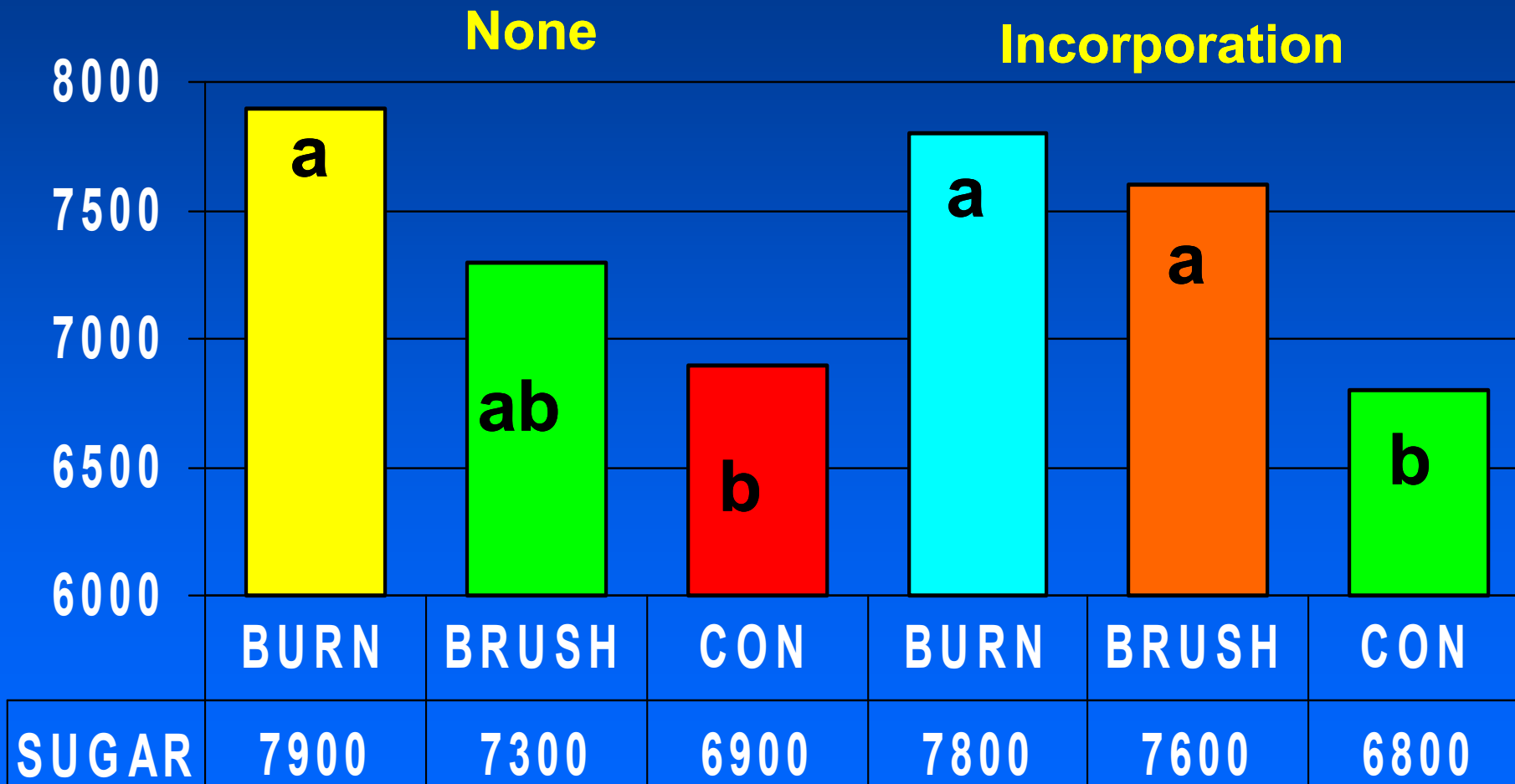
-HoCP 96-540

-Burn, brush, full retention

-Cultivated twice after residue trts.

2009 Sugar yield

($p < 0.05$)



Summary

-Remove as soon as possible.

**-If mechanically removed off-bar early,
and off-bar again after a rain to max soil to
residue contact.**

Nitrogen X Residue

- HoCP 96-540 1st stubble, 2nd stubble
 - HoCP 96-540 and L 99-226 1st stubble
 - Burn, brush, full retention
 - 100, 140, 160 lbs N/A
-

Summary

-2 of the 3 studies showed equivalent yields with brushing and burning if you increased nitrogen rate.

-Repeating at multiple locations with very large plots with additional tillage treatments.

New Varieties

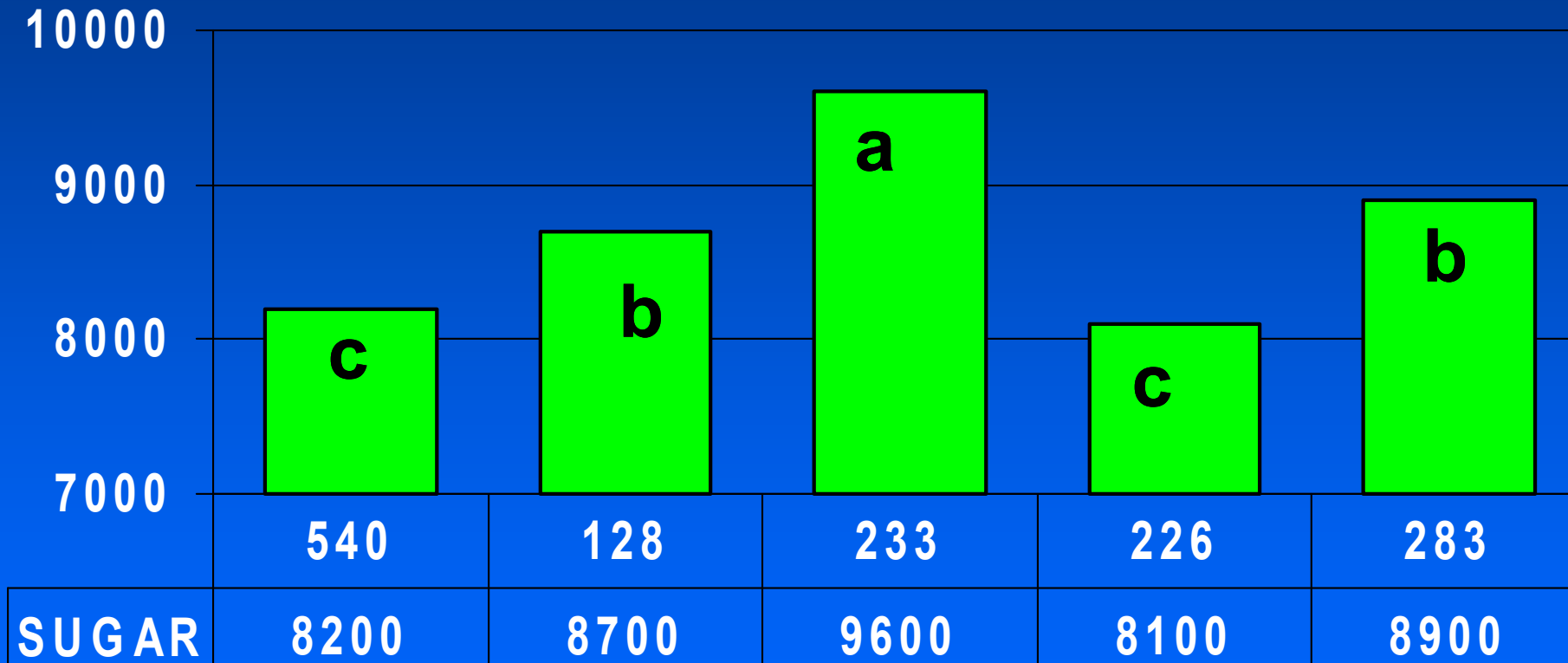
-1st ratoon

-Heavy soil

-Burn or full retention

Sugar yield

($p < 0.05$)



Summary

- Remove residue soon after harvest and before emergence.**
 - HoCP 96-540 and L 99-226 are sensitive.**
 - Most commercial varieties will show yield loss... L 99-233, L01-283 may be tolerant.**
-

Should I shred?



Shredding with 540 & 128

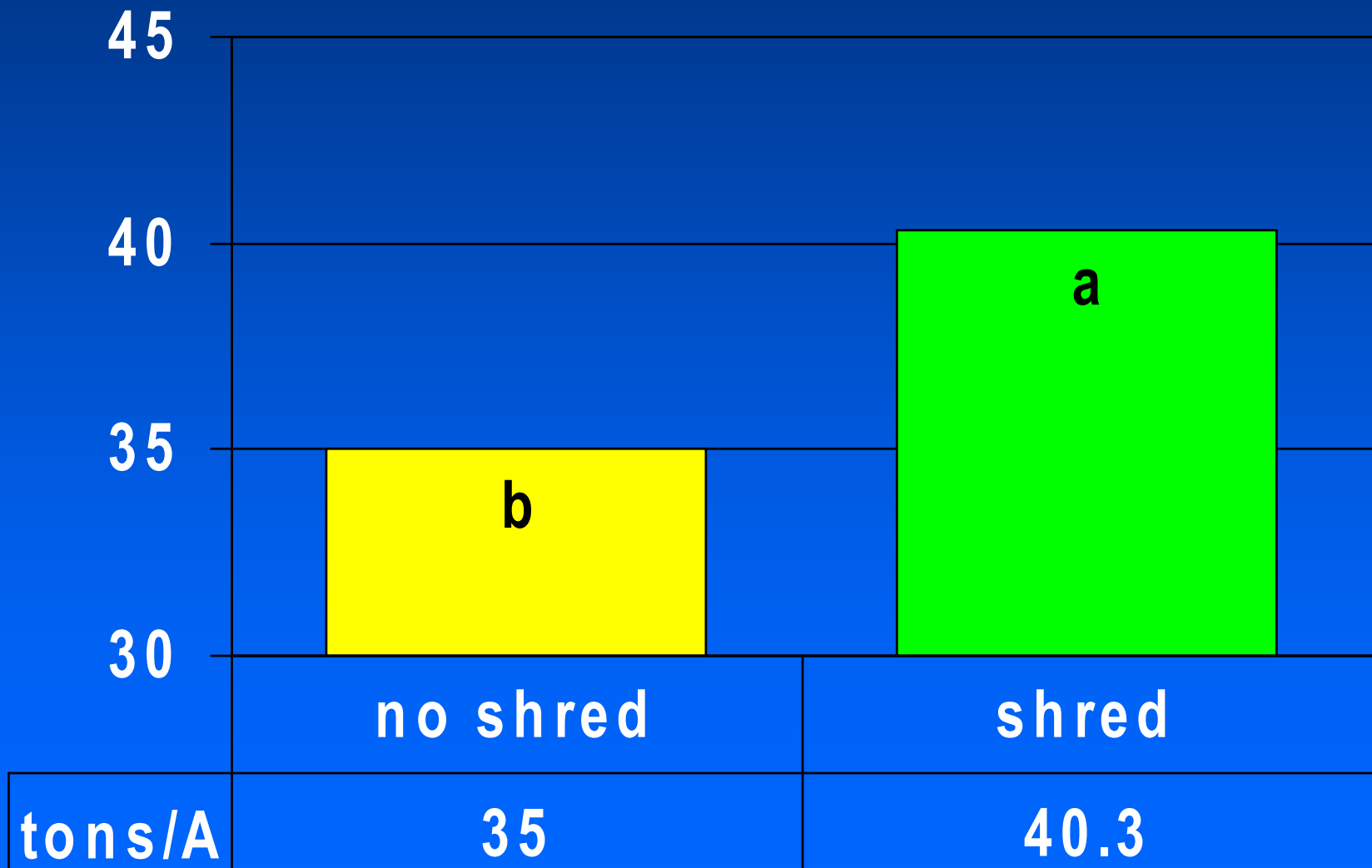
-No shred

-Shred

-1st stubble (taken for seed as plant cane)

540 Tons

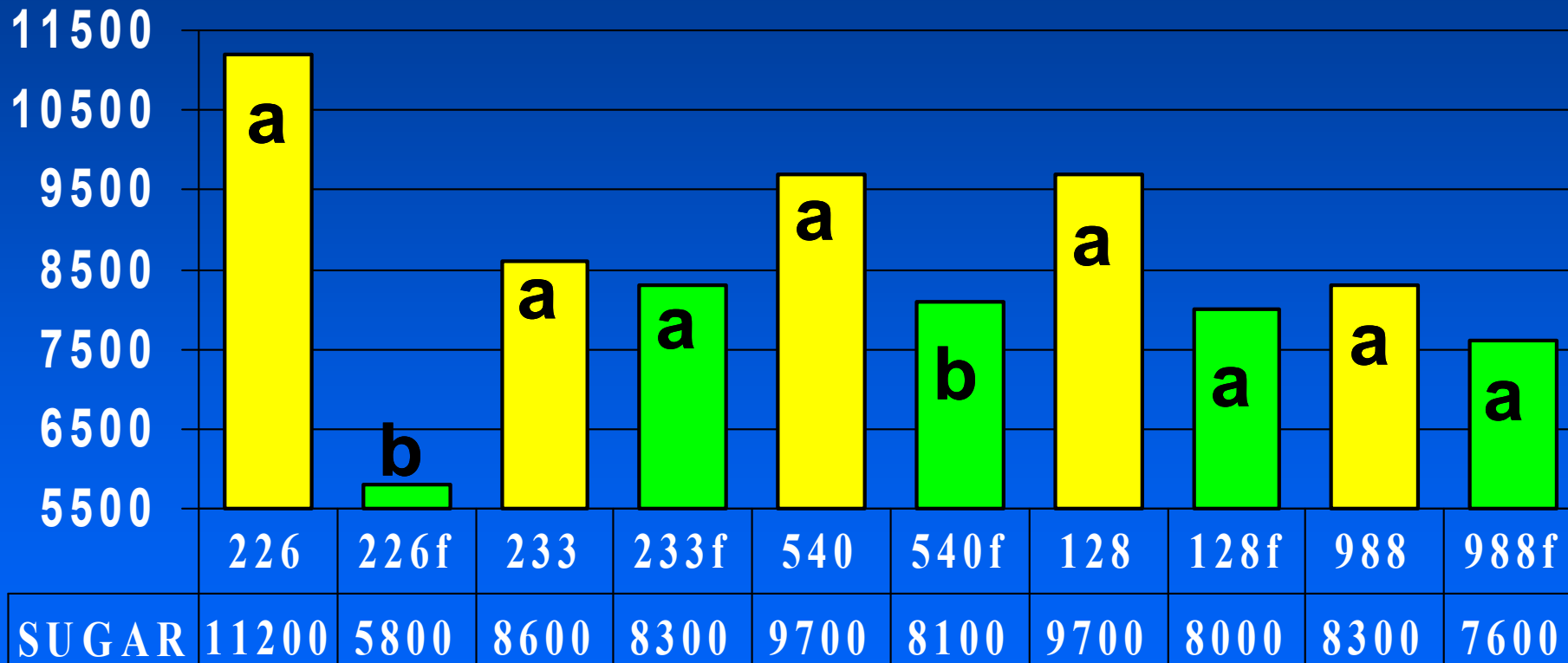
($p < 0.05$)



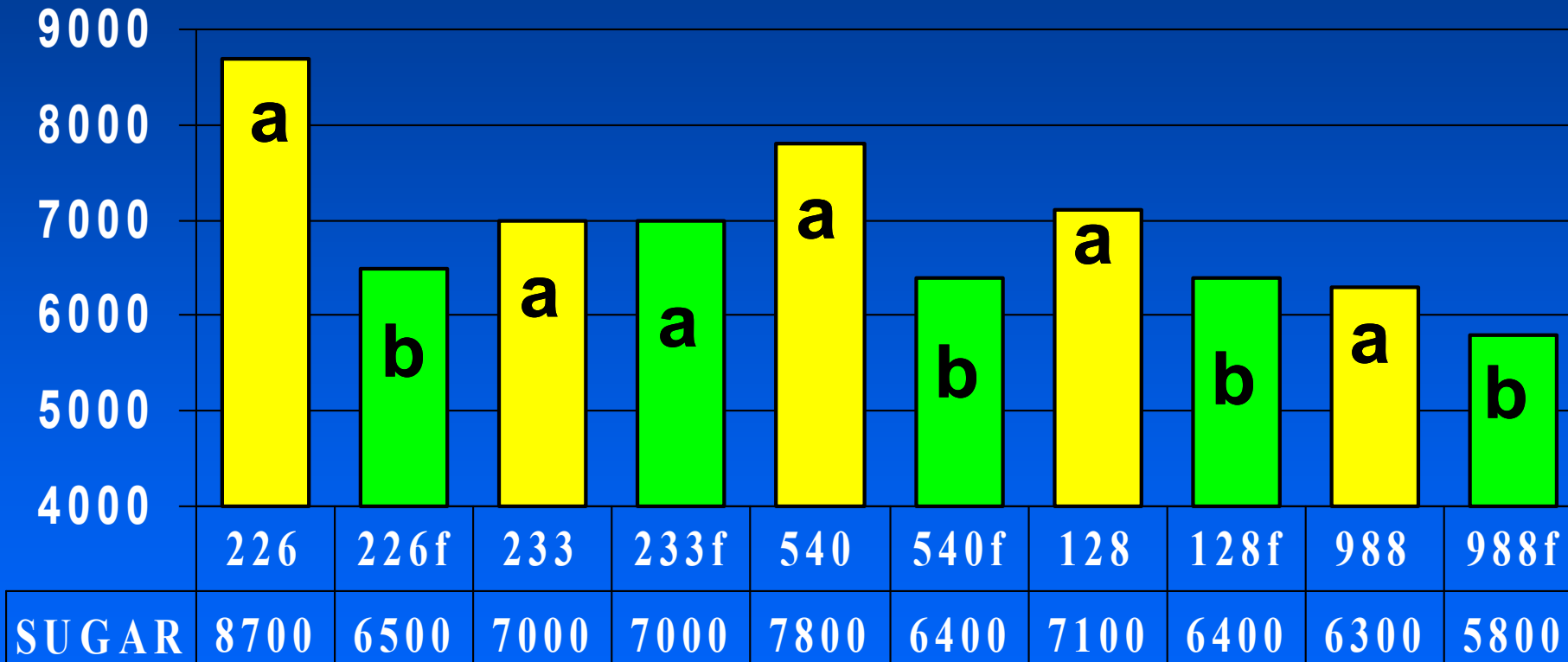
Water Tolerance



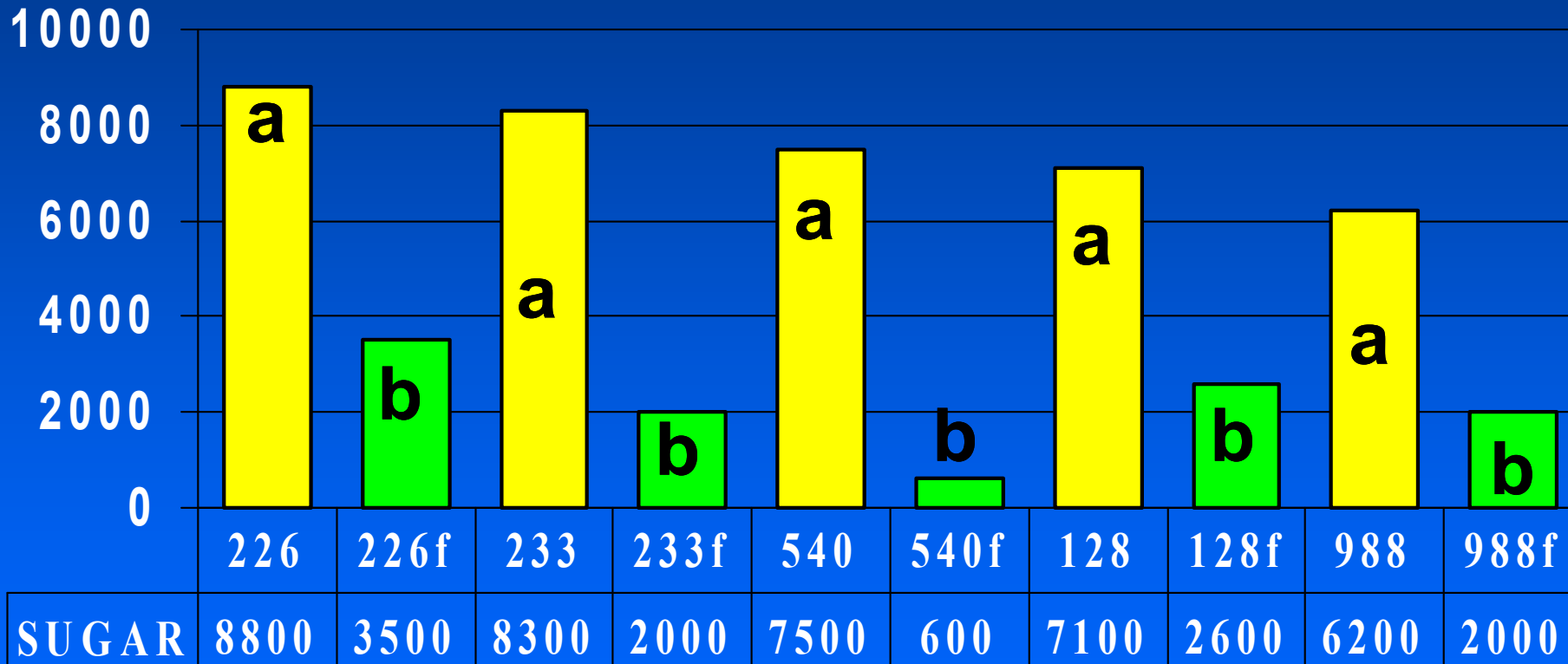
Plant cane sugar yield $(p < 0.05)$



1st stubble sugar yield (p<0.05)



2nd stubble sugar yield (p<0.05)



Take home message

- Get water off of rutted fields asap.
 - Lots of mulch in major ditches.
-

Drought and Late Planting

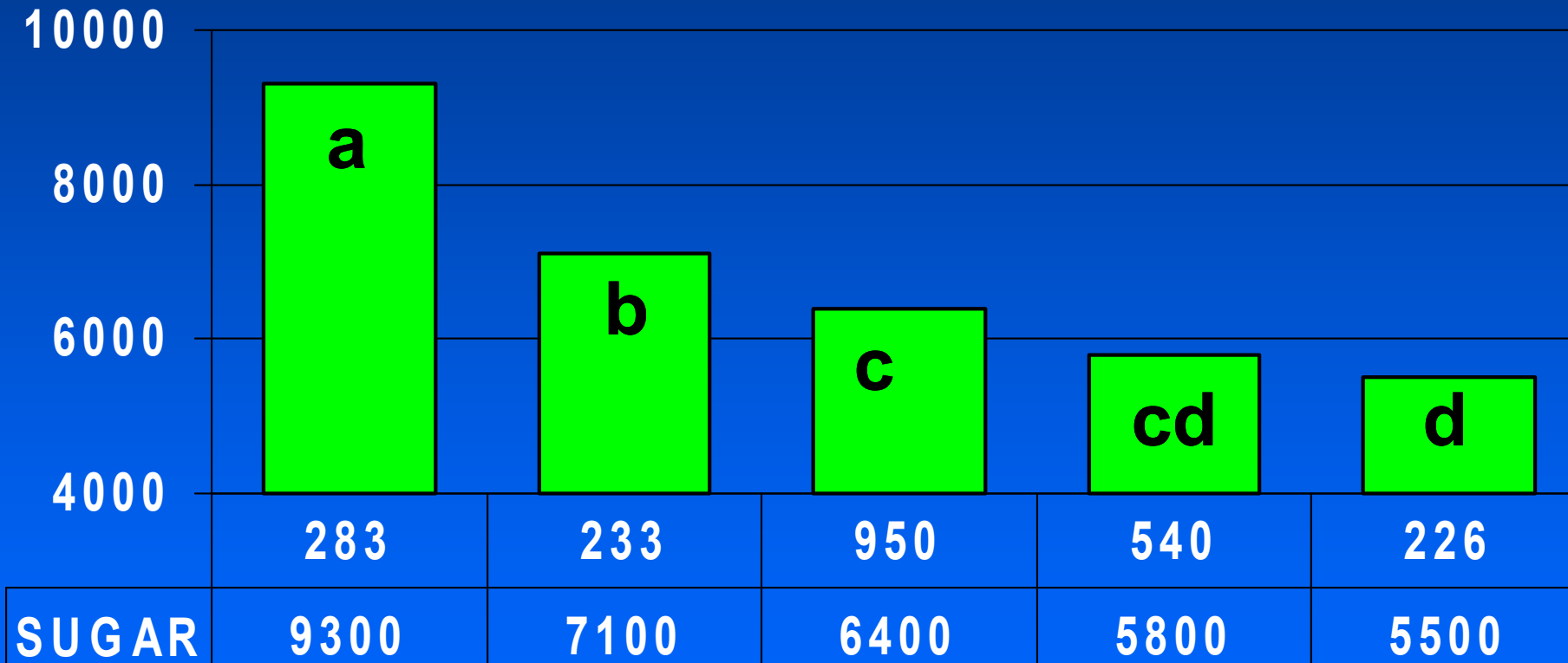
-All major commercials.

-Heavy land, planted Oct 15, 2008.

-No rain for six weeks after planting.

Sugar yield

($p < 0.05$)



Take home message

-L01-283 appears to tolerate stress well.

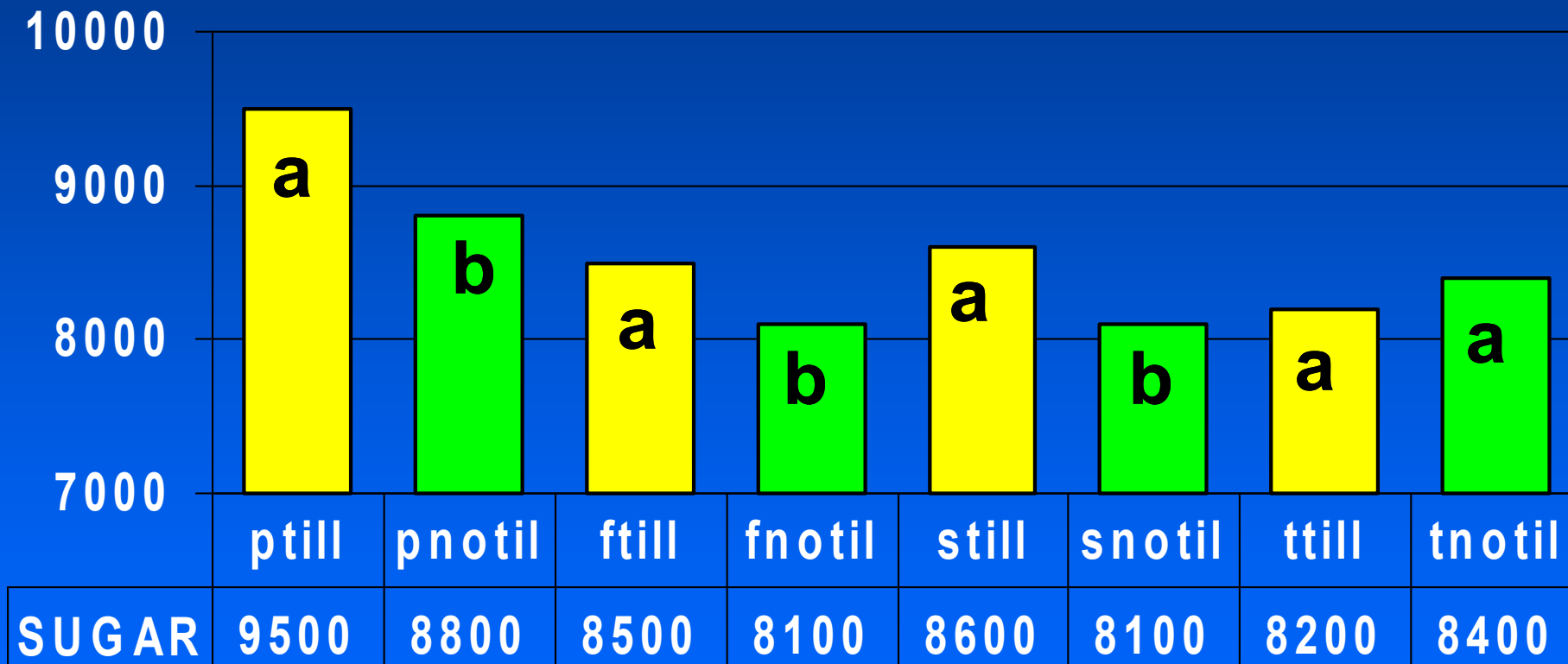
-New variety vigor???????

Cultivation of Plant Cane?

- No till and tillage.
 - Split plots every year.
 - Two complete cane cycles.
-

Plant-cane Tillage Effects

($p < 0.05$)



Take home message

-Adding additional soil to plant-cane has long term benefits for the complete cane cycle.
