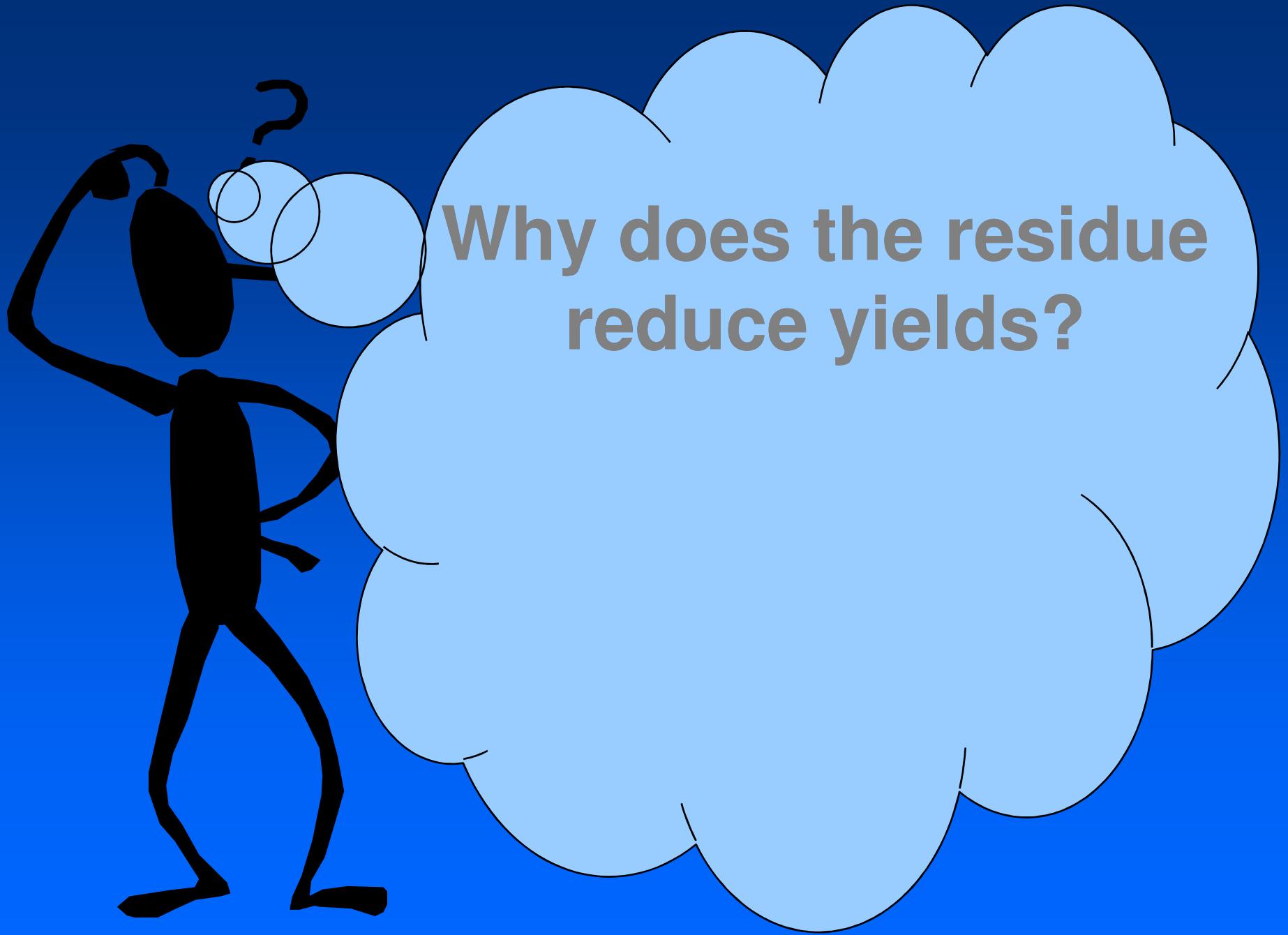


Cultural Practices





**Why does the residue
reduce yields?**

Some Factors

- Cool, wet soil.
- Delays bud germination by at least a week.
- Natural compounds in the residue can reduce germination of buds by 50%.



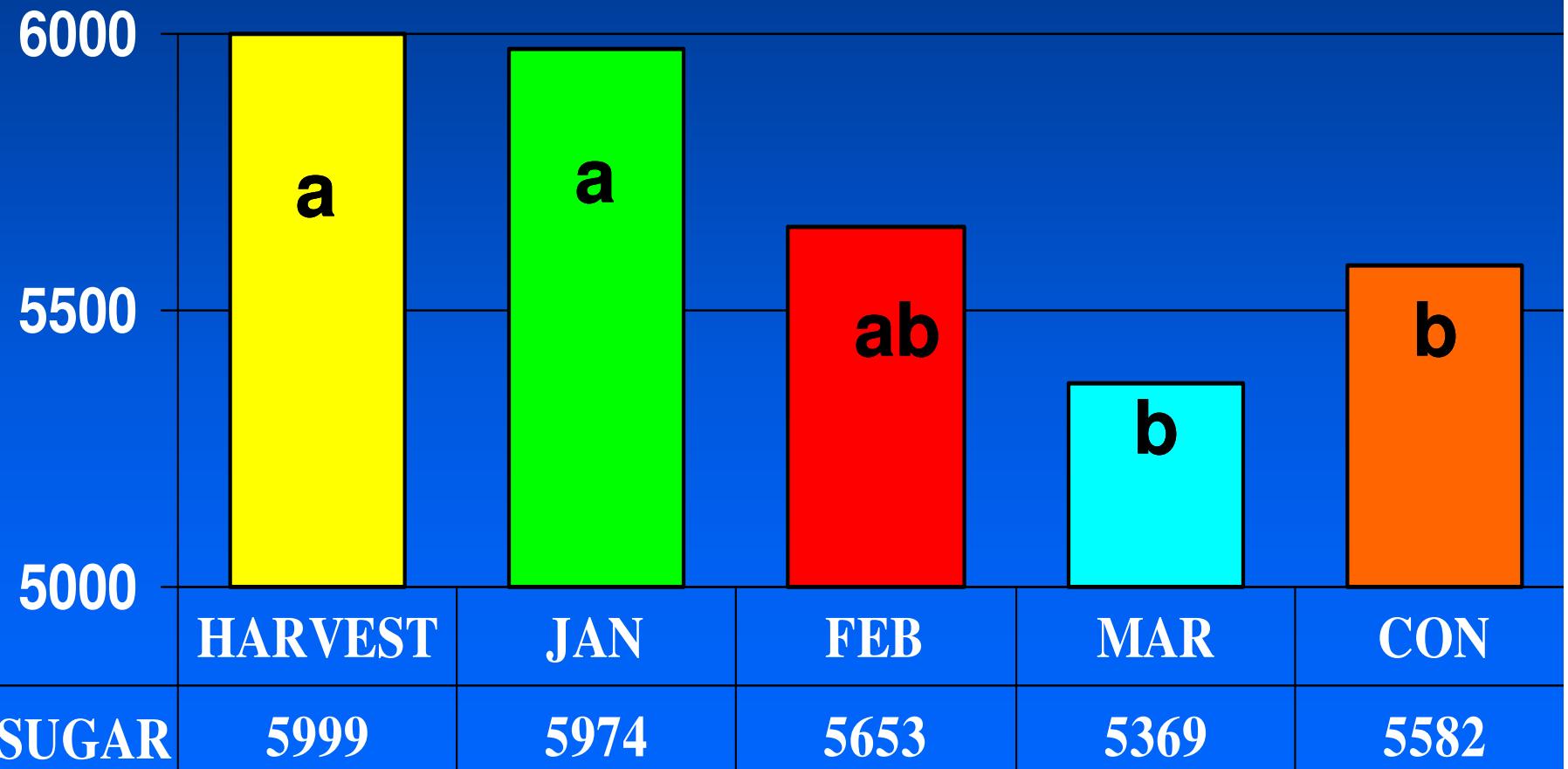
**When should I remove
the residue?
I want freeze
protection and winter
weed control.**

Timing and Method

- 1st, 2nd, and 3rd stubble**
 - Heavy and light soil**
 - Removal timings monthly from harvest until March**
-

Sugar yield

(p<0.05)



Soil Temperature

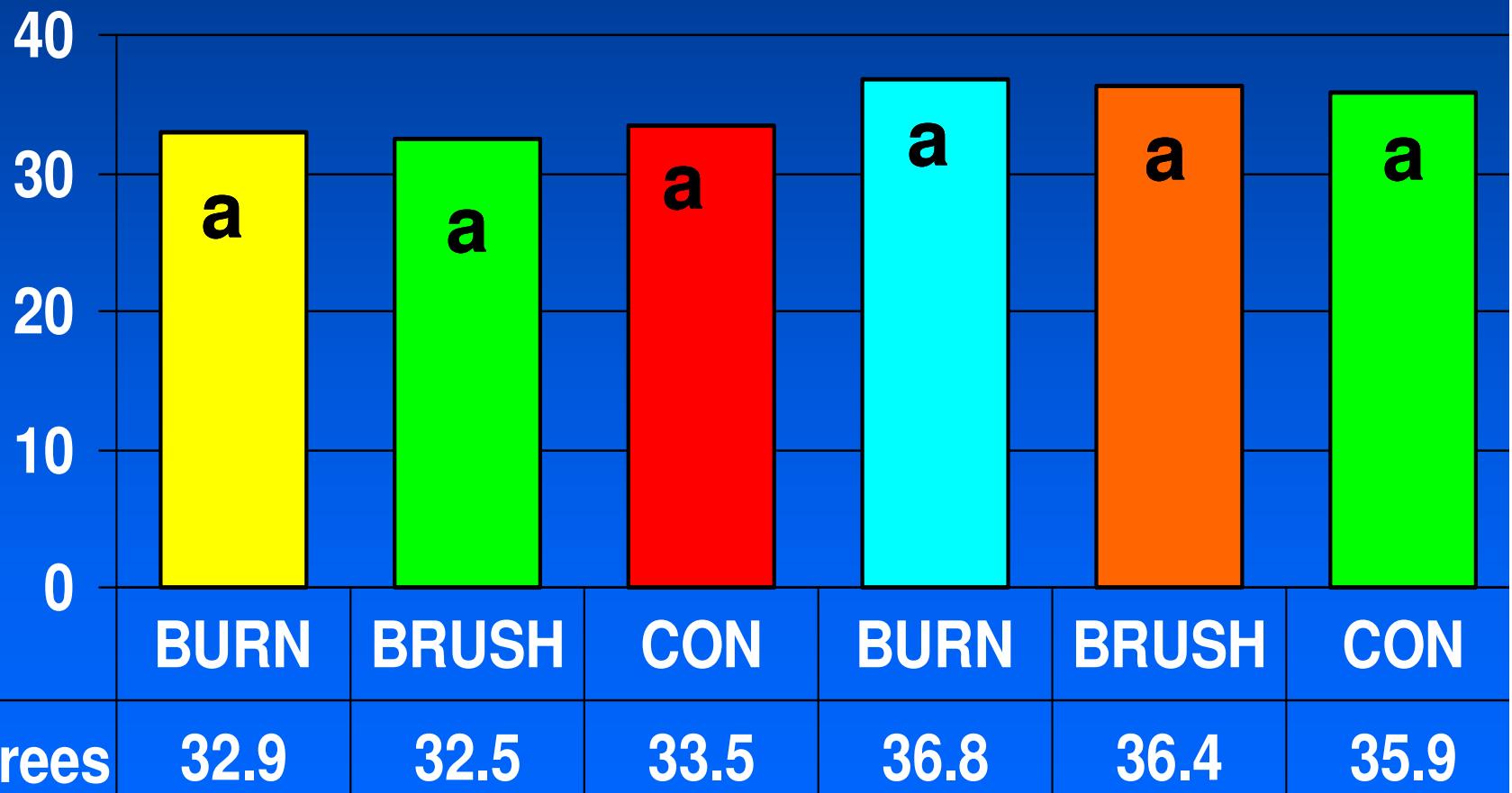
- HoCP 96-540**
- Burn, brush, full retention**
- Temperature sensors at 1 and 4 inches.**

2009 Soil temperature

(p<0.05)

One inch

Four inches



Summary

- Best to remove soon after harvest or when crop is dormant (often Jan).
 - Don't remove in March unless mechanically.
-



**What are my removal
options and is
mechanical removal
always as good as the
match?**





12/20/2001



10/04/2001

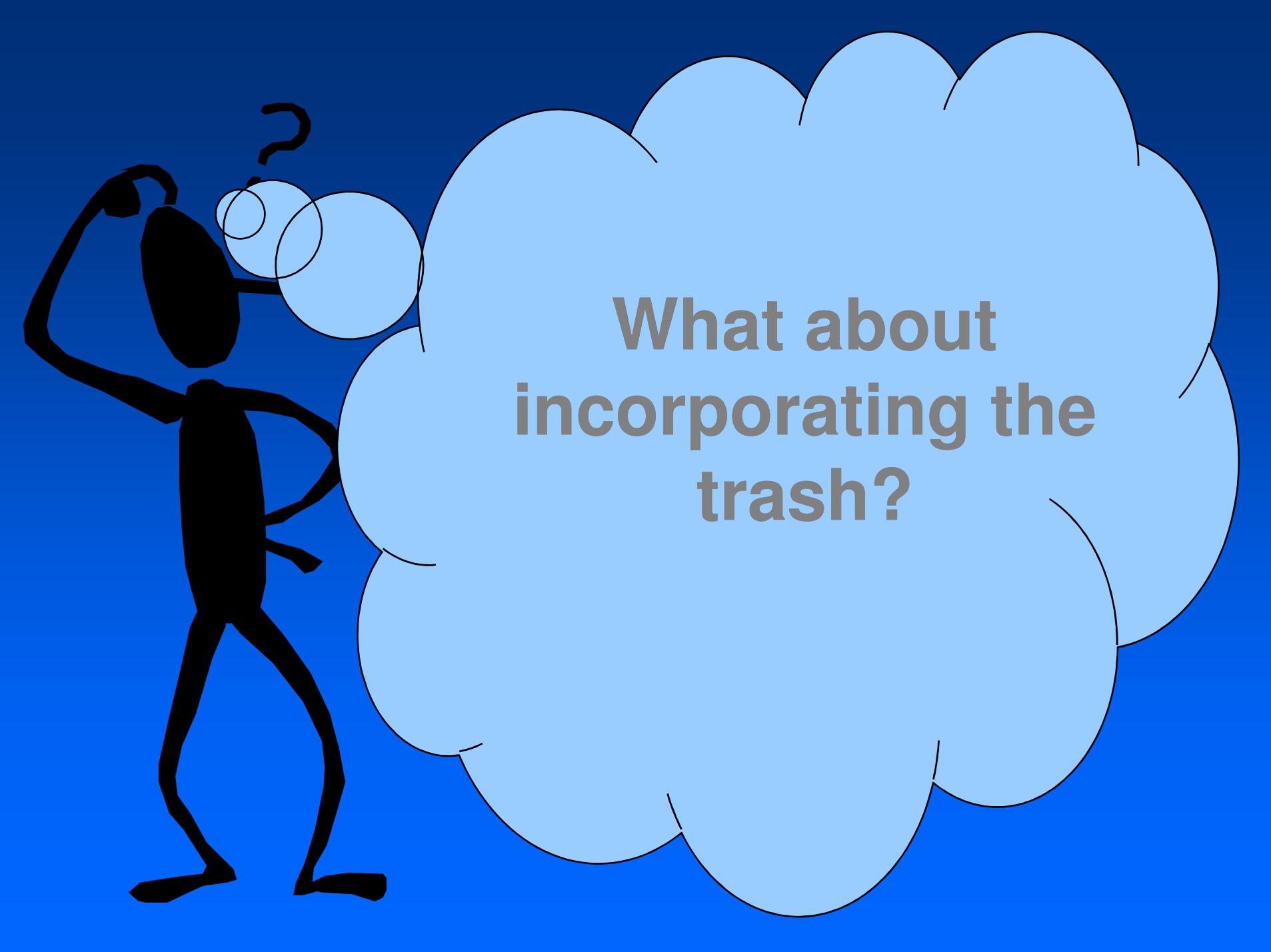


Mechanical removal

- Inconsistent results
 - Better than full retention but usually not as good as burning.
-







What about
incorporating the
trash?

Tillage X Residue

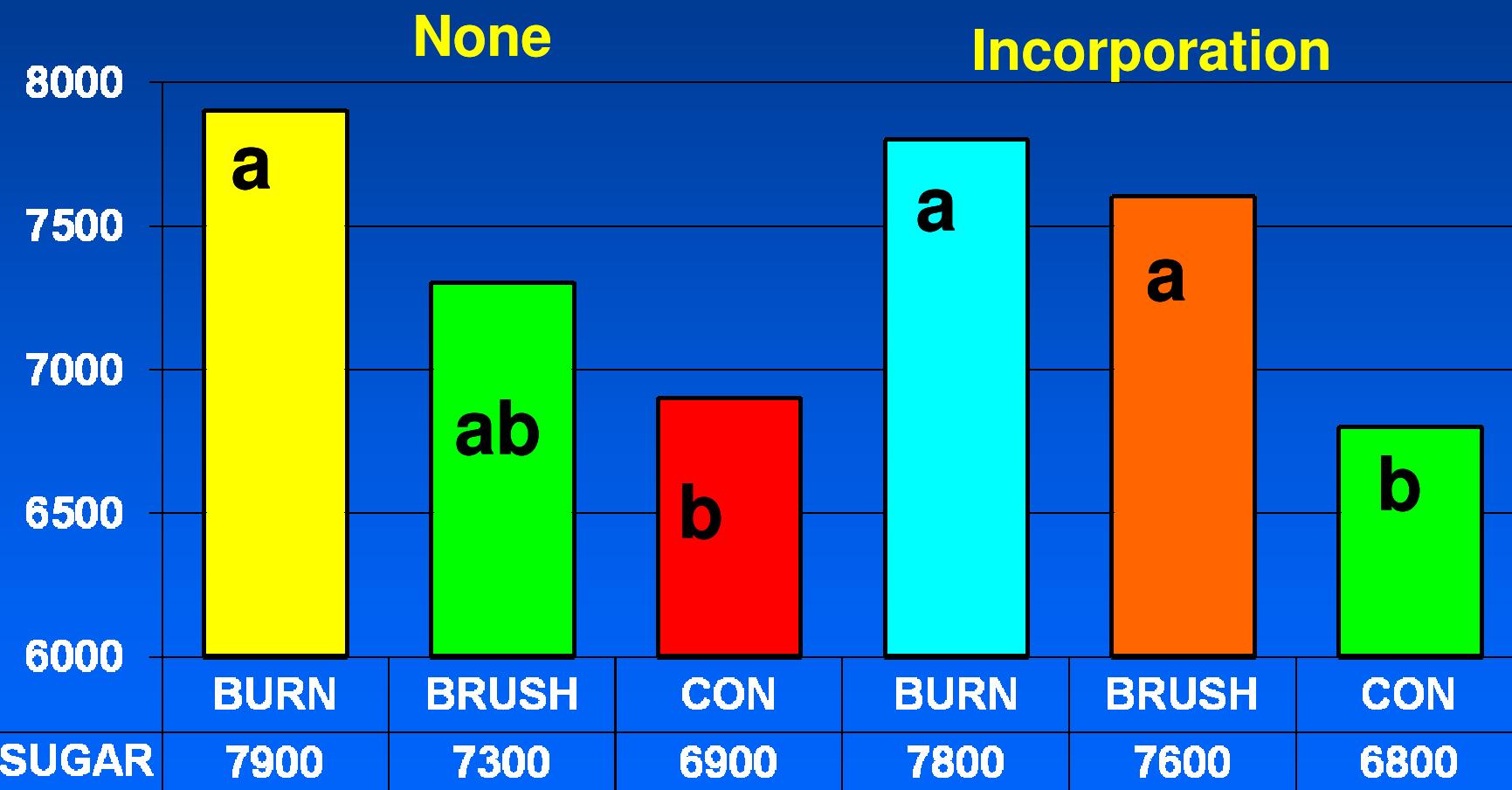
-HoCP 96-540

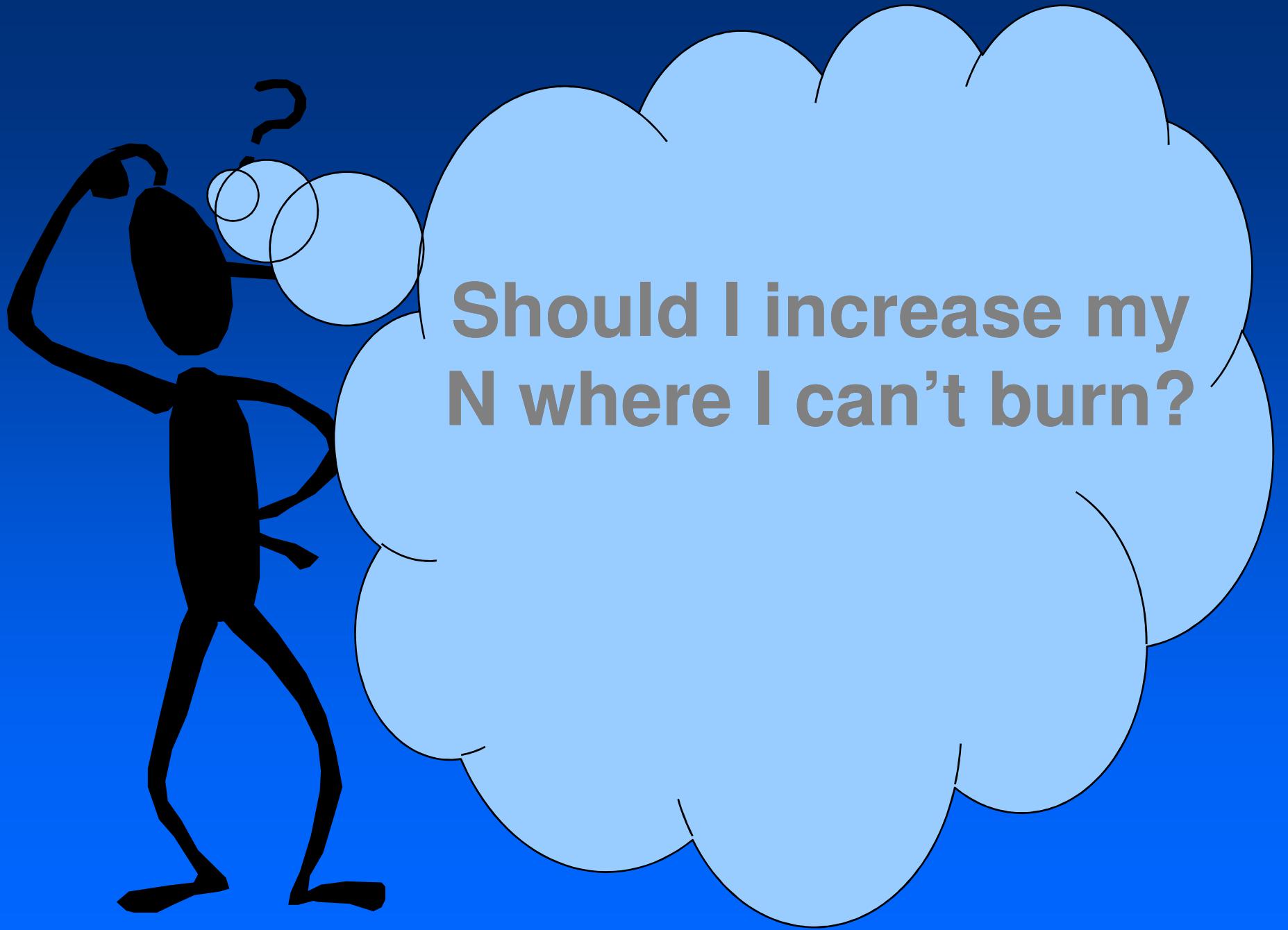
-Burn, brush, full retention

-Cultivated twice after residue trts.

2009 Sugar yield

(p<0.05)





Should I increase my
N where I can't burn?

Mulch by N Experiment

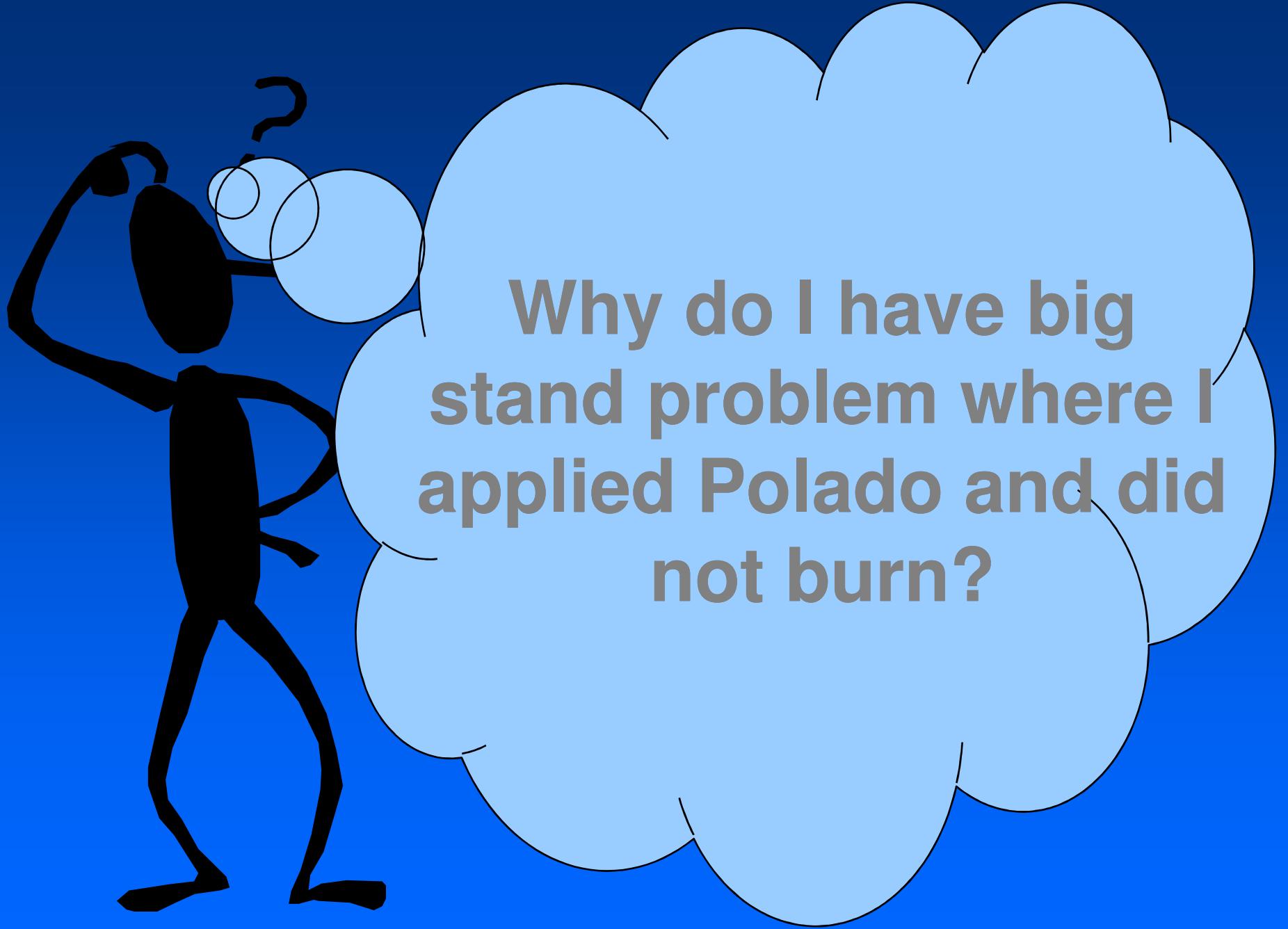


Nitrogen X Residue

- HoCP 96-540 1st stubble, 2nd stubble
 - HoCP 96-540 and L 99-226 1st stubble
 - Burn, brush, full retention
 - 100, 120, 140 lbs N/A
-

Summary

- 3 of the 4 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.**
-



**Why do I have big
stand problem where I
applied Polado and did
not burn?**

Residue and Ripeners on Ratoons

-HoCP 96-540

L 99-233

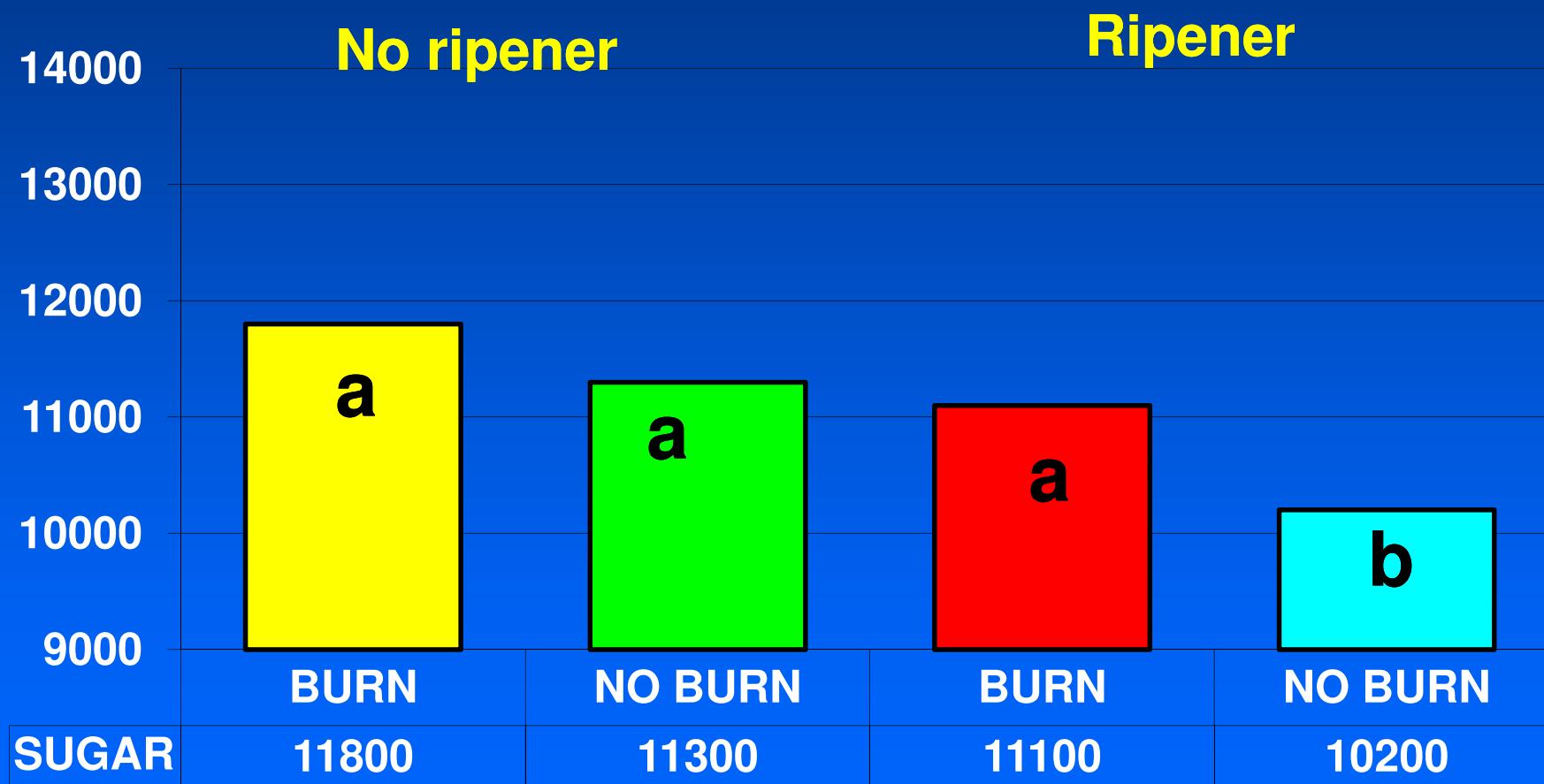
L 99-226

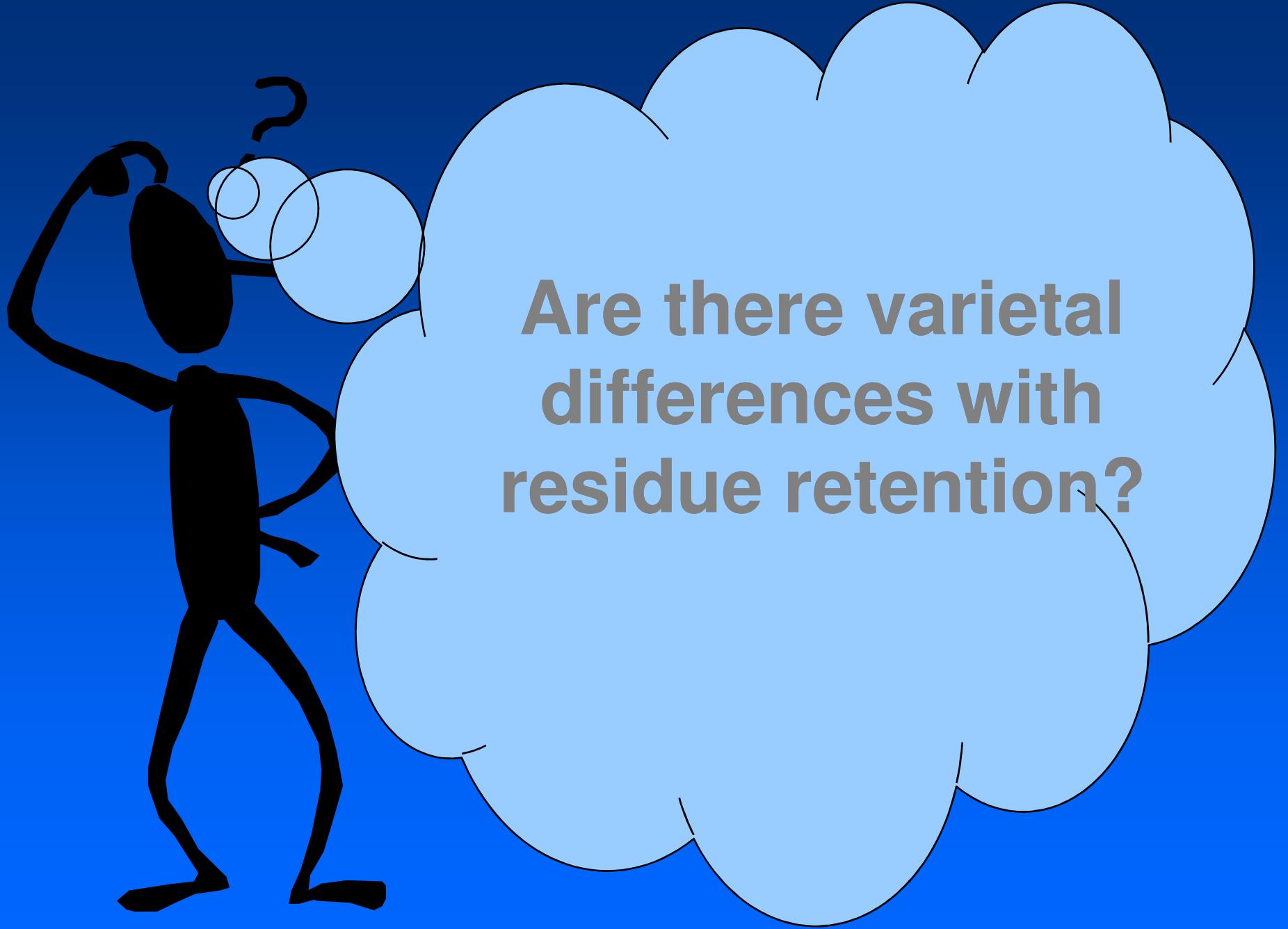
-Whole plots: 5.3 oz WeatherMAX or none.

-Split plots: burn or residue undisturbed

Sugar yield

(p<0.05)





**Are there varietal
differences with
residue retention?**

New Varieties

-1st ratoon

-Heavy soil

-Burn or full retention

Sugar yield



Summary

- Remove as soon as possible...especially if ripener was applied.**
 - If mechanically removed off-bar early, and off-bar again after a rain to max soil to residue contact.**
-

Should I shred?

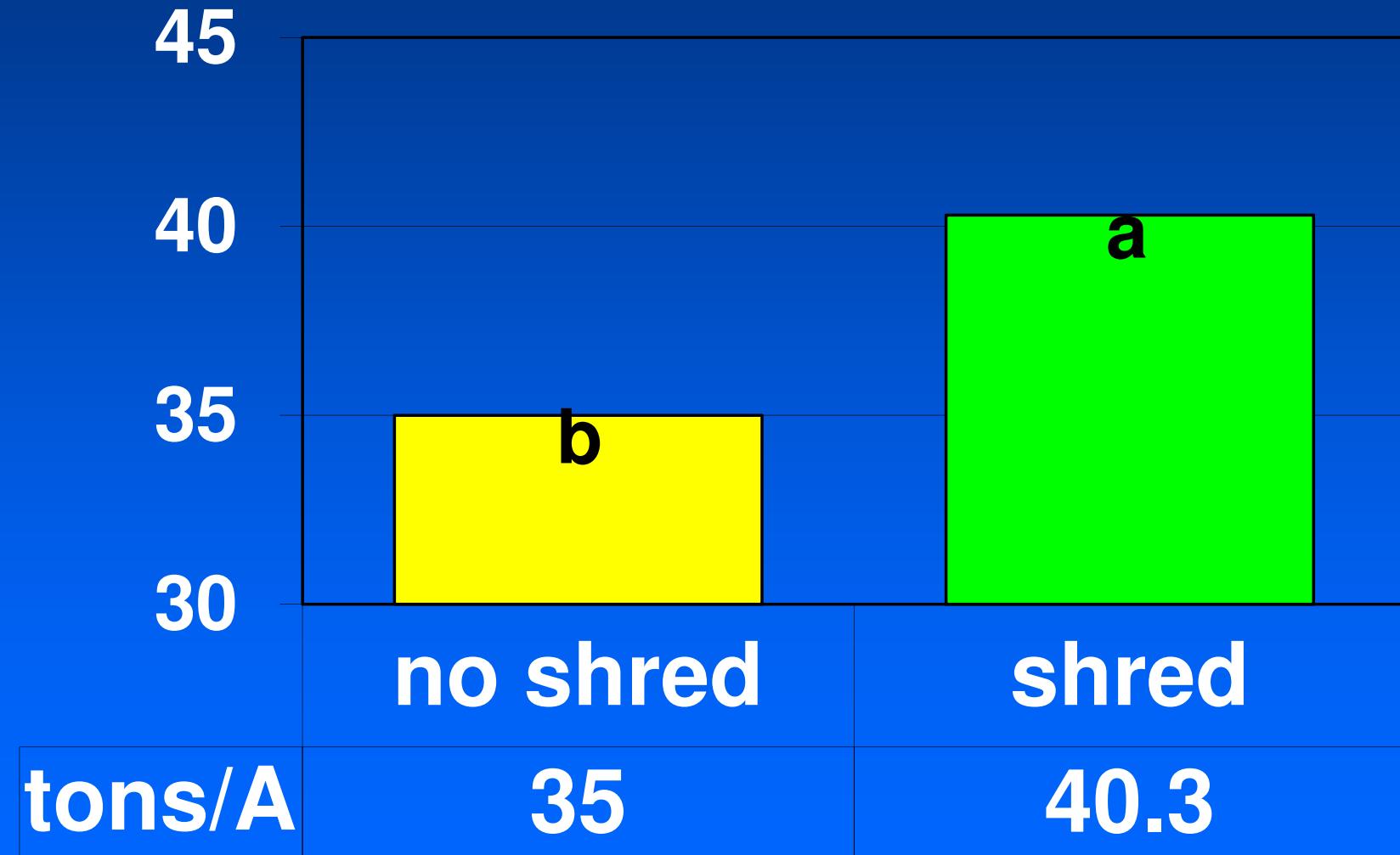


540 and 226

- No shred
 - Shred
 - 1st stubble (taken for seed as plant cane) or early planted plant-cane
-

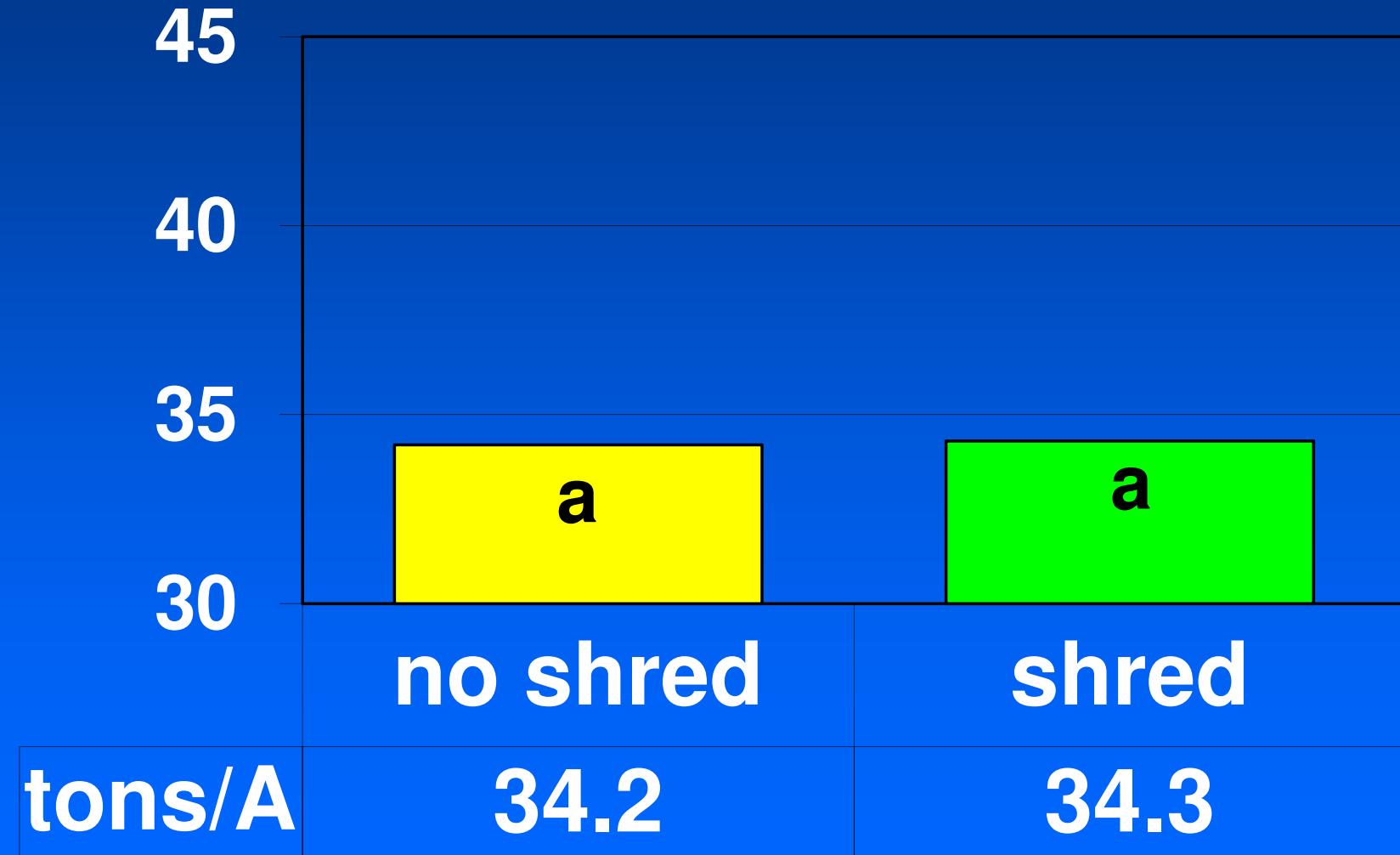
540 Tons

($p<0.05$)



226 tons

(p<0.05)



Things to consider...

- **¾ studies showed yield increase.**
- RSD
- Stubble damage
- Timing
- Burning

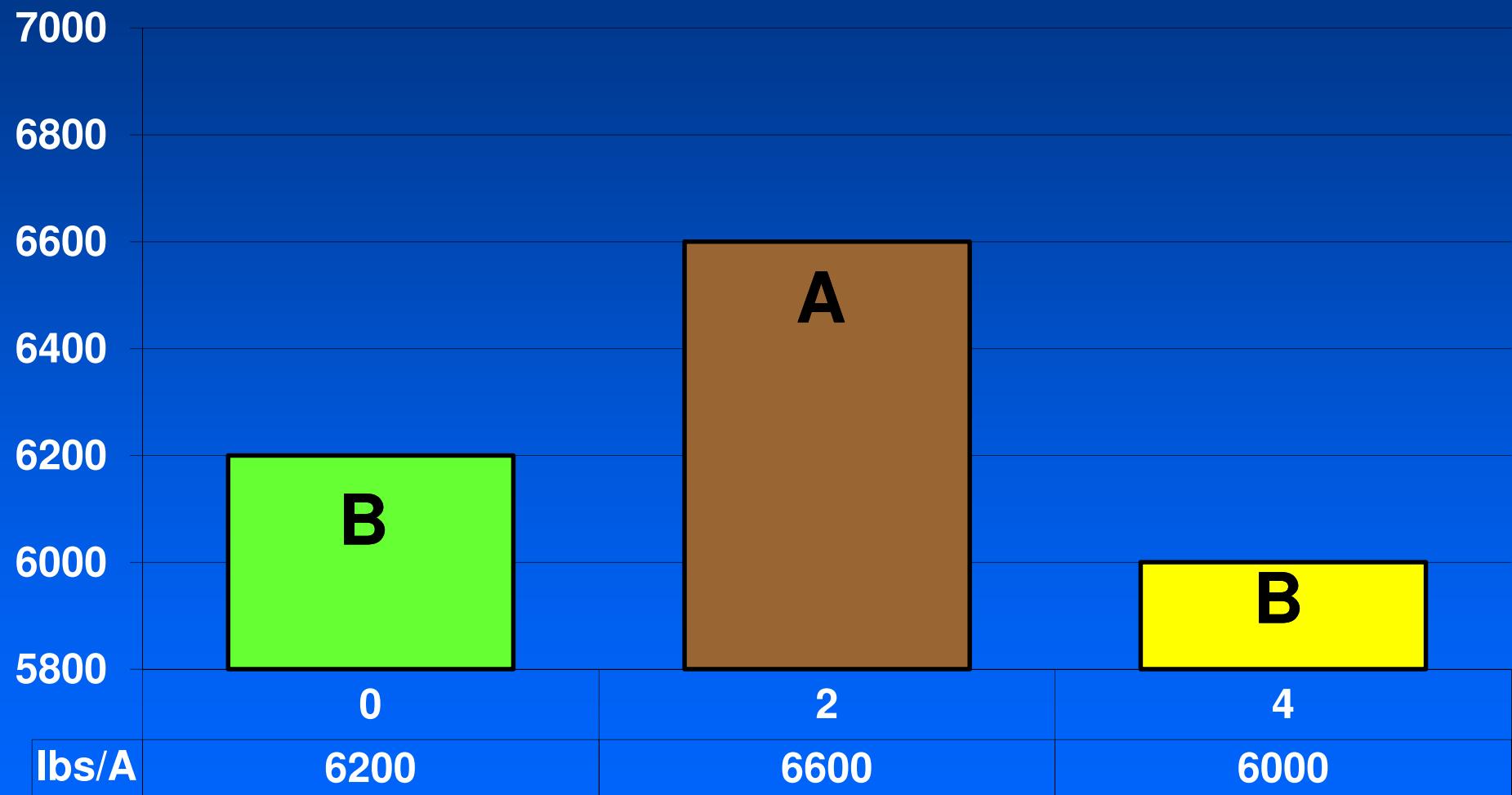


Lay-by Experiment



- HoCP 96-540
- 0, 2, or 4 inches at lay-by
- First stubble.

1st stubble sugar yield



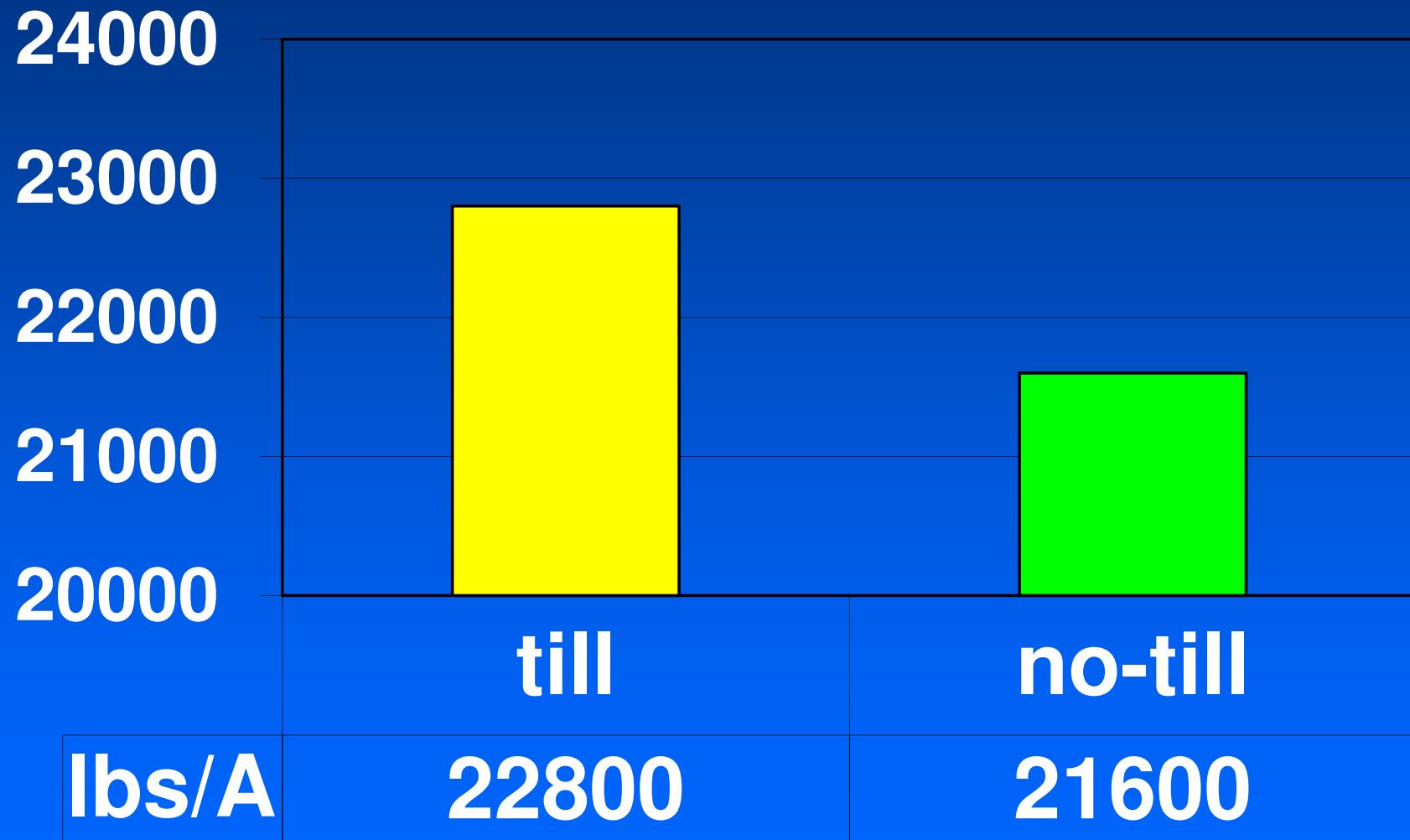
Summary

- HoCP 96-540 had improved yield with 2 inches of soil added to the row top at layby relative to 0 and 4 inches.
- Previous work showed that increasing dirting with plant cane resulted in higher yield with plant and stubble crops.

Dirting plant-cane

- No additional soil or 2-3 inches
 - Whole cycle : plant, 1st, and 2nd
-

Plant cane



Summary

- Dirting plant cane increased yields for the next three years.
- Not excessive dirting to have a pointed row for combine harvester.

Raccoon Damage

- HoCP 96-540, L 99-233, L 99-226, HoCP 00-950, and L 01-283.
- L 99-233 and HoCP 00-950
6,800 lbs/A
- Ho96-540, L 99-226, and L01-283
10,000 lbs/A

