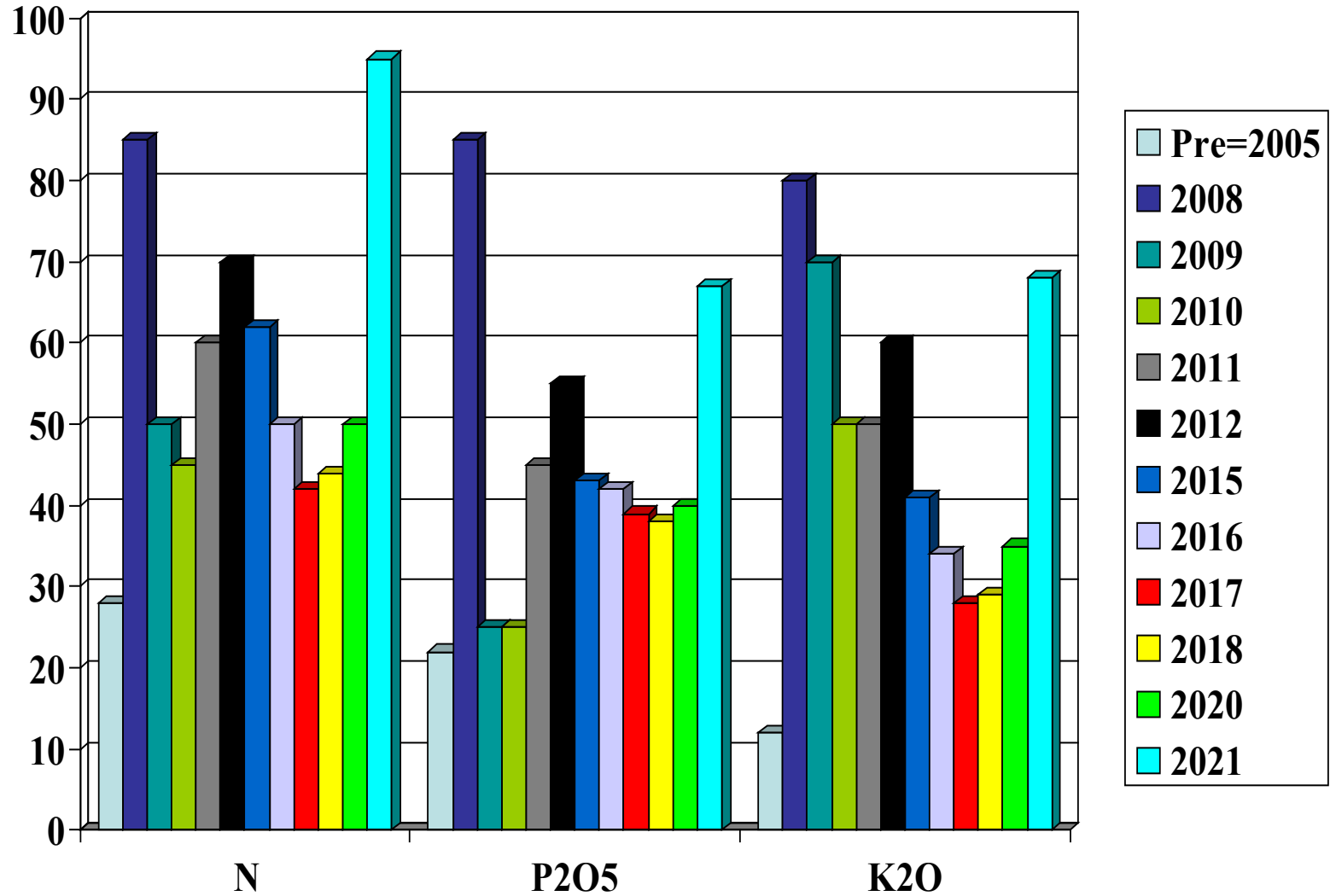


# Dealing With High Fertilizer Prices...Again !

Glen Harris, UGA(Tifton)



# Fertilizer Price for N-P-K (cents/pound)



# **Which Crop Needs the Most Fertilizer ?**

**(If “Medium” Soil Test P and K)**

**Corn (300-150-190)**

**Cotton (90-50-50)**

**Soybeans (0-40-80)**

**Peanuts (0-0-0)**

**Wheat (100-40-40)**

**Wheat – Soybean (100-80-120)**

Banding P&K  
Legume Cover Crops for N  
Chicken Litter  
Other “By-Product” Fertilizers

There are no...



## So what Can I “Cut Out” or “Cut Back” On ?

Snake Oils

“Unproven Products” –for example, Biologicals

## What Should I focus on ?

Good Soil Sampling and Recommendations

Liming and pH

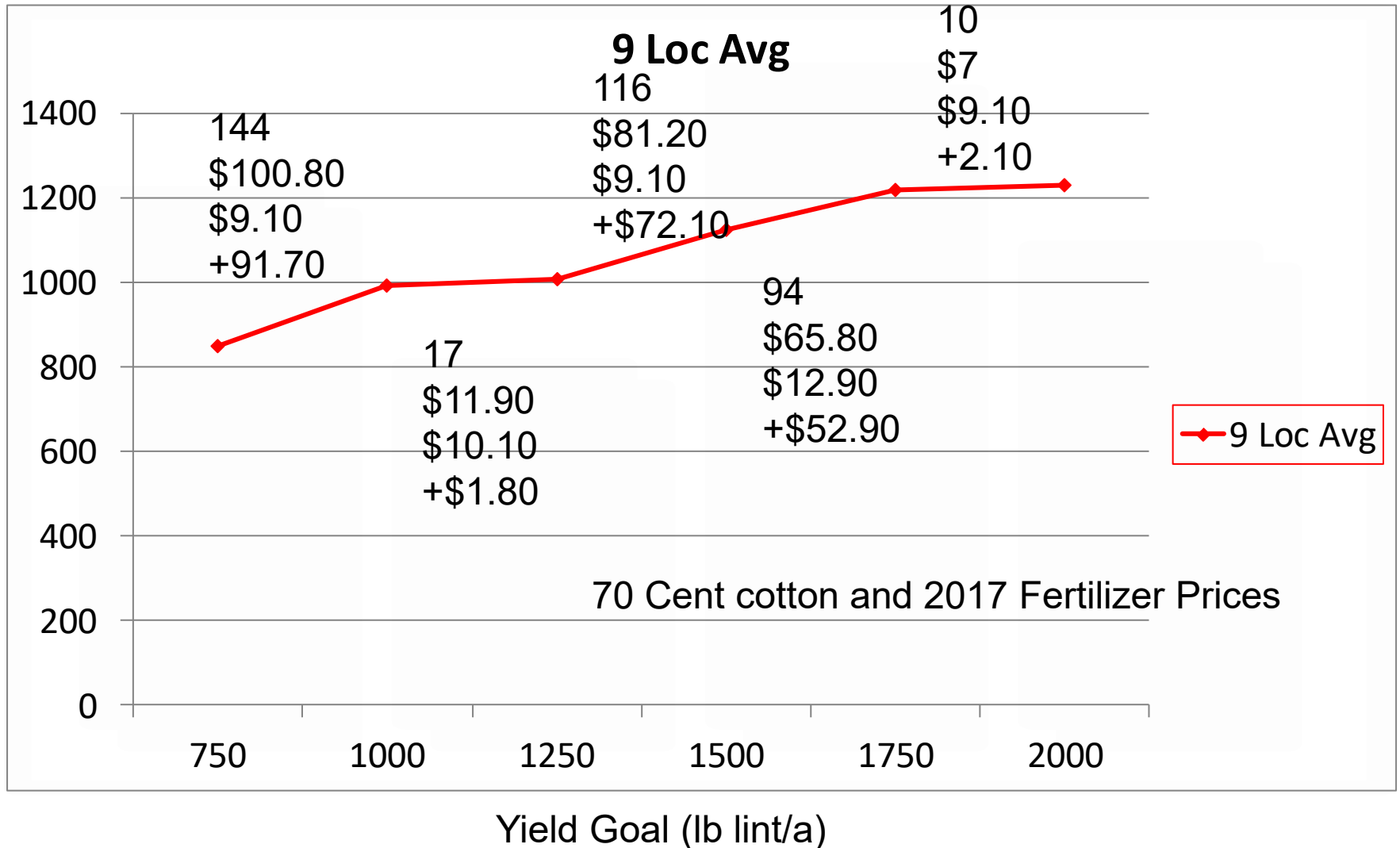
N-P-K by Yield Goal (Corn and Cotton)

Micronutrients ? – Don’t Cut out Boron

# Fertilizing Cotton (N-P-K) By Yield Goal – 2017+2018

Actual Yield (lb lint/a)

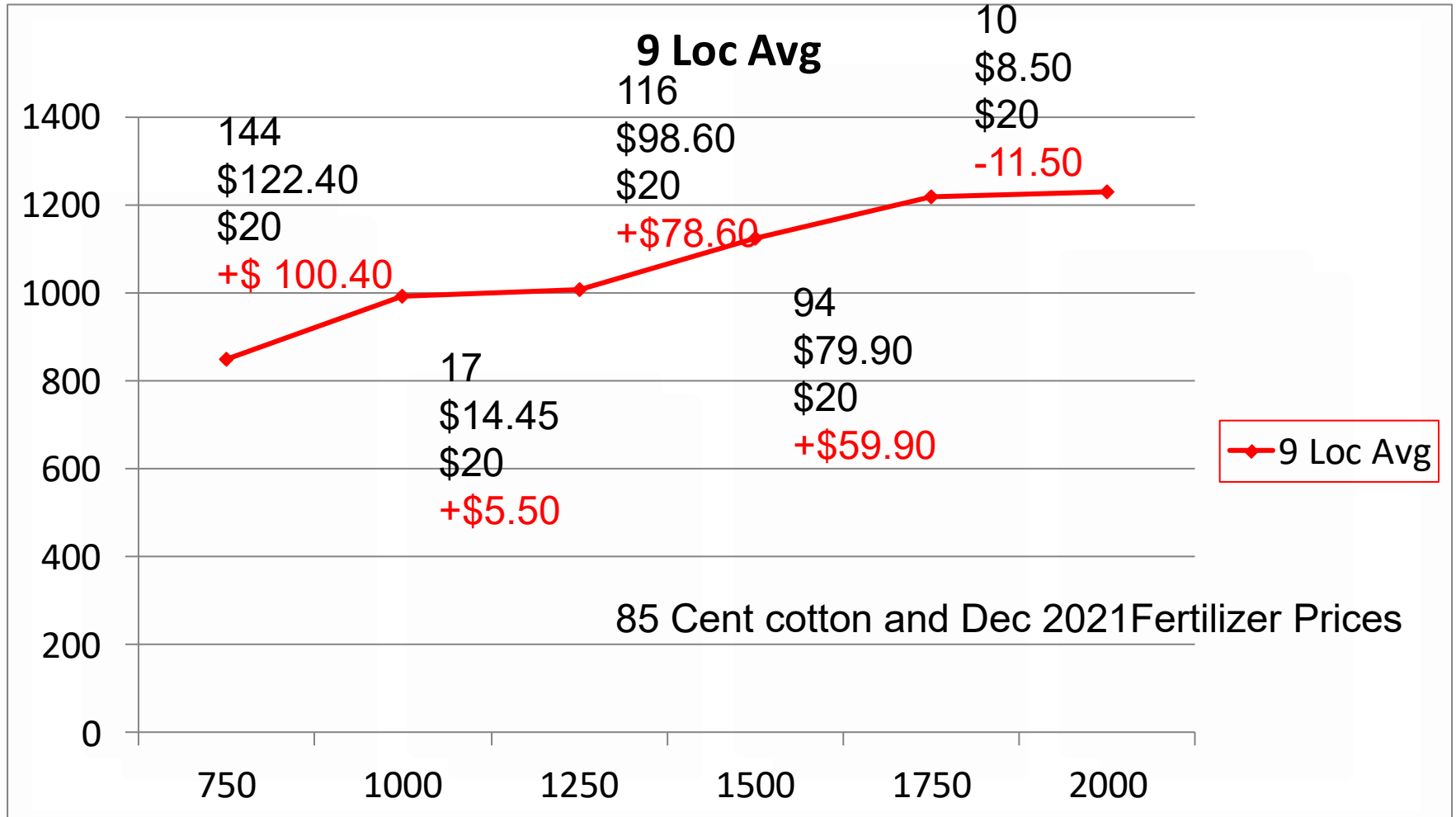
Variety = DP 1646



# Fertilizing Cotton (N-P-K) By Yield Goal – 2017+2018

Variety = DP 1646

Actual Yield (lb lint/a)



85 Cent cotton and Dec 2021 Fertilizer Prices

You've probably **heard...**

“If you band apply your P & K fertilizer at planting you can reduce the rate (by  $\frac{1}{4}$  to  $\frac{1}{3}$ )”

**But** the ...

Official UGA Stance =

If your soil test P and K levels are medium or higher,  
There is no advantage to band applications

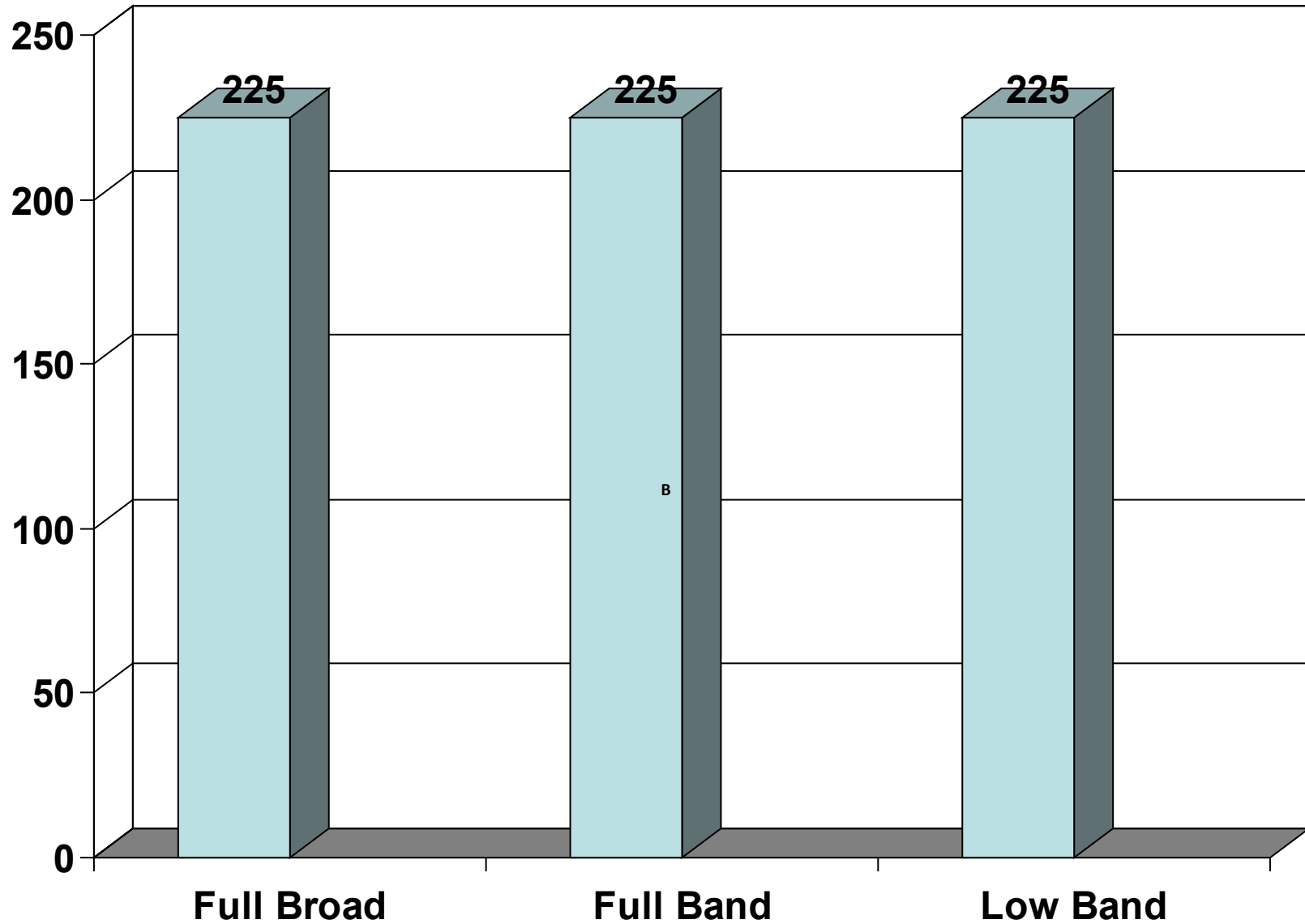


Official UGA Stance =

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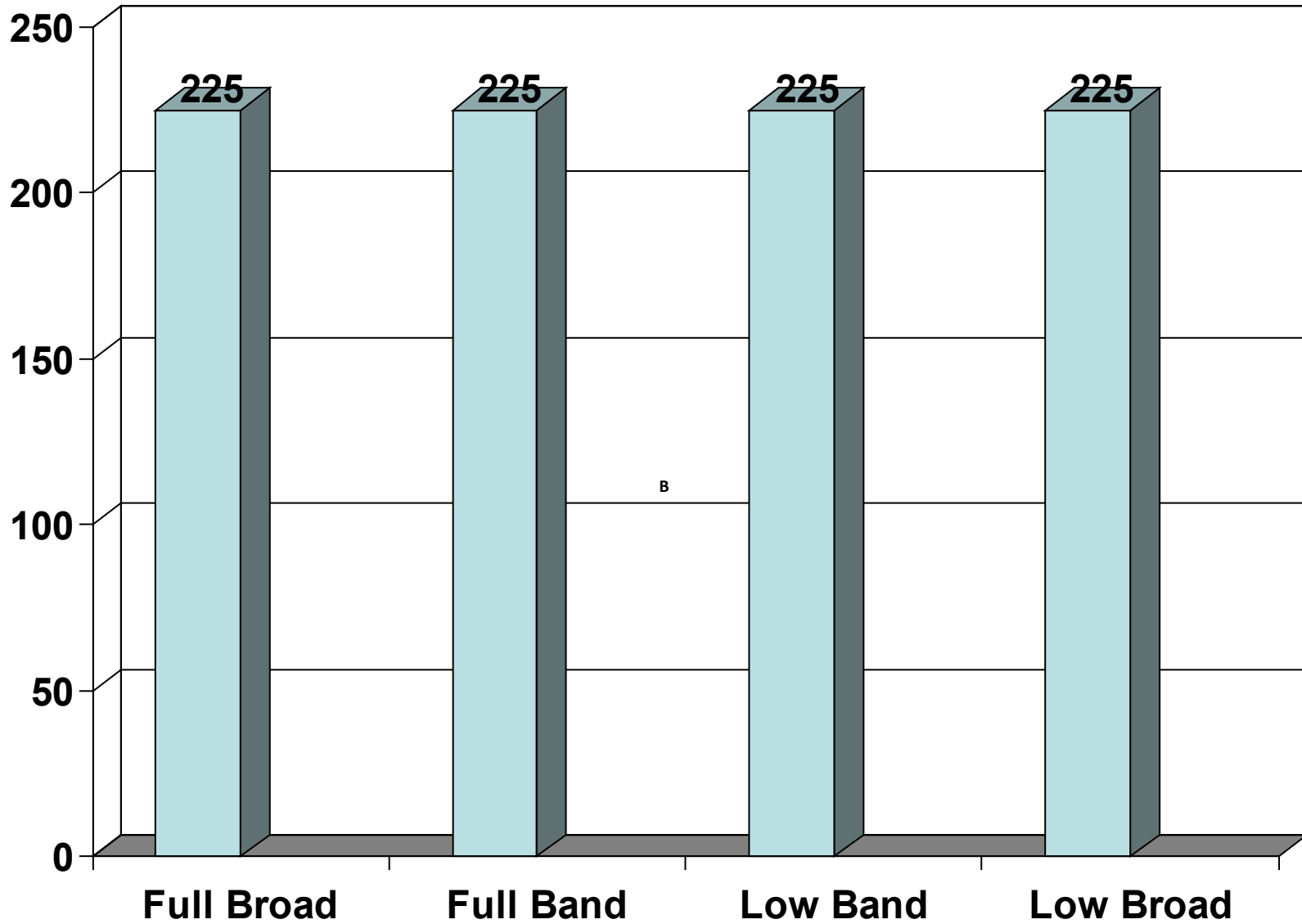
Corn Yield (bu/a)

# Hypothetical P&K Banding Trial



Corn Yield (bu/a)

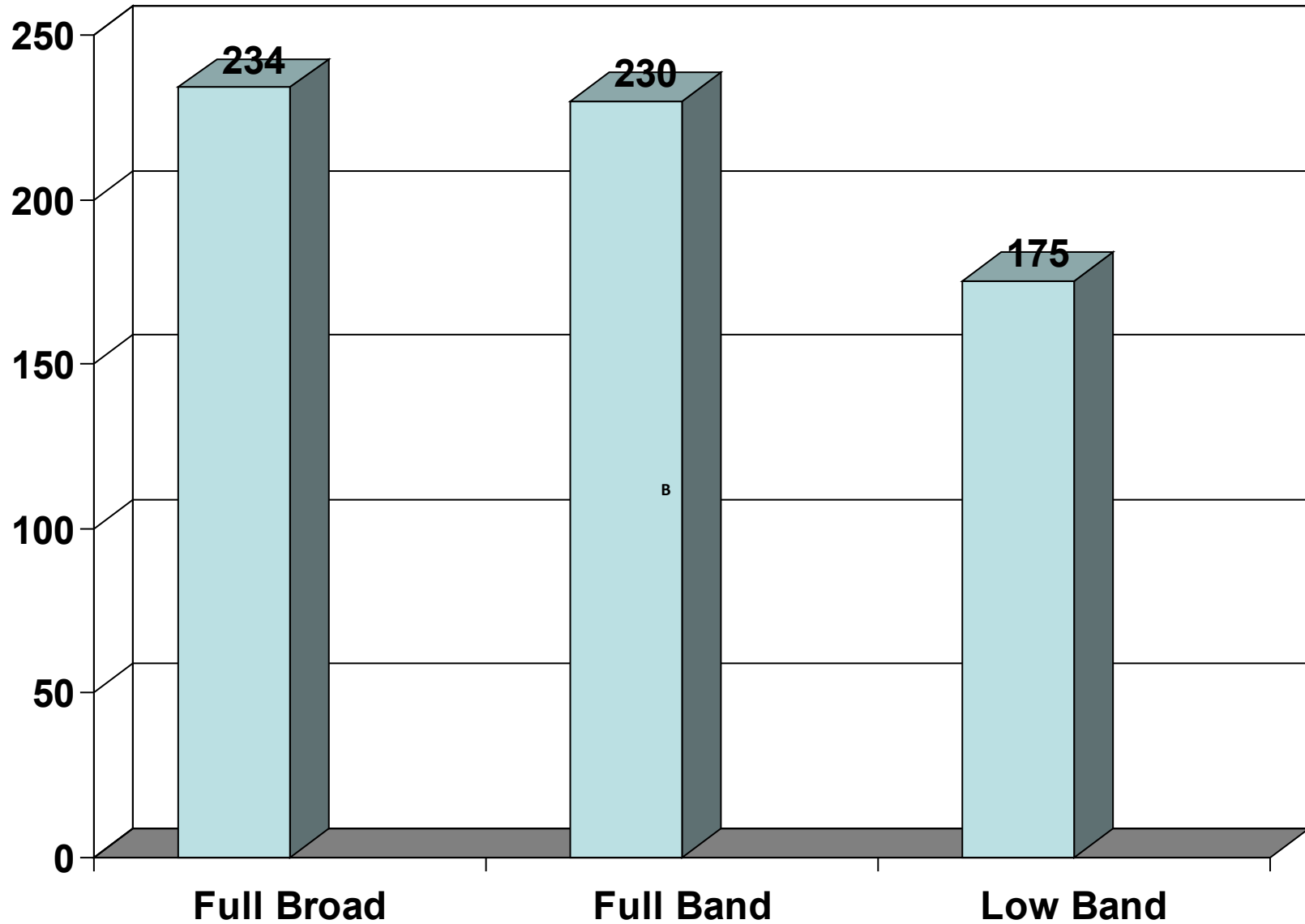
# Hypothetical P&K Banding Trial



Corn Yield (bu/a)

# P & K Placement Trial – 2021

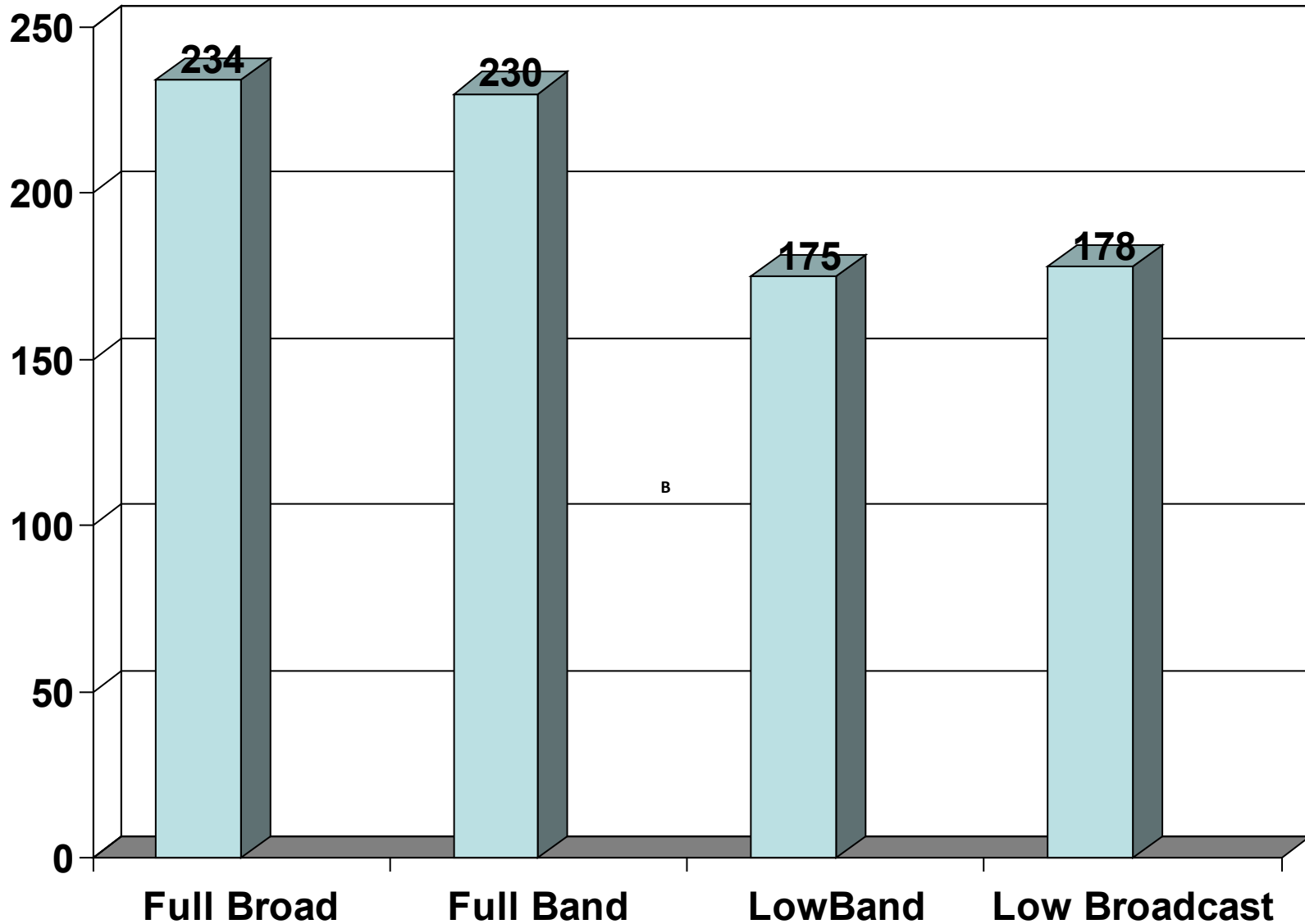
## Corey Bryant and Simer Virk



Corn Yield (bu/a)

# P & K Placement Trial – 2021

## Corey Bryant and Simer Virk



# Legume Cover Crops for Nitrogen



# Cover Crops

From “Managing Cover Crops Profitably”:

**Crimson Clover – “Nitrogen Contribution  
of 70-150 lb N/a**

**Hairy Vetch – “Partially Replace Nitrogen Fertilizer  
on corn...hairy vetch with no fertilizer was  
the preferred option for “risk-averse” no-till  
farmers in Georgia”**

**Realistically....50 lb N/a “N Credit” ???**

# The Value of Litter

- Pre 2005 Prices

- 60# N x .28 x .6 = 10.08
- 60 # P2O5 x .22 x .8 = 10.56
- 40 # K2O x .12 x .8 = 3.84
- » Total = **\$24.48**

- 2008 Prices

- 60#N x .85 x .6 = 30.60
- 60#P2O5 x .85 x .8 = 40.80
- 40#K2O x .80 x .8 = 25.60
- » Total = **\$97.00**

- » 2020 Prices

- 60#N x .50 x .6 = 18.00
- 60#P2O5 x .40 x .8 = 19.20
- 60#K2O x .35 x .8 = 16.80
- » Total = **\$54.00**



Other Nutrients ?  
Organic Matter ?  
Liming ?  
Nematode Suppresion ?



# The Value of Litter

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- 60#K2O x .35 x .8 = 16.80
- » Total = **\$54.00**



- » Current (Nov 2021)

- 60#N x .95 x .6 = 34.20
- 60#P2O5 x .67 x .8 = 32.16
- 60#K2O x .68 x .8 = 32.64
- » Total = **\$99.00**

# How Much Fertilizer Value is Removed in Vines? (Based on 2020 Fertilizer Prices)

50-10-60 (lbs N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O/a)

50-40-35 (cents N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O/a )

25.00-4.00-21.00 = \$50/a

**Nov 2021 = \$95**



Gin Trash

2 - 1 - 1

Good Soil Amendment



# Biosolids



# Wood Ash



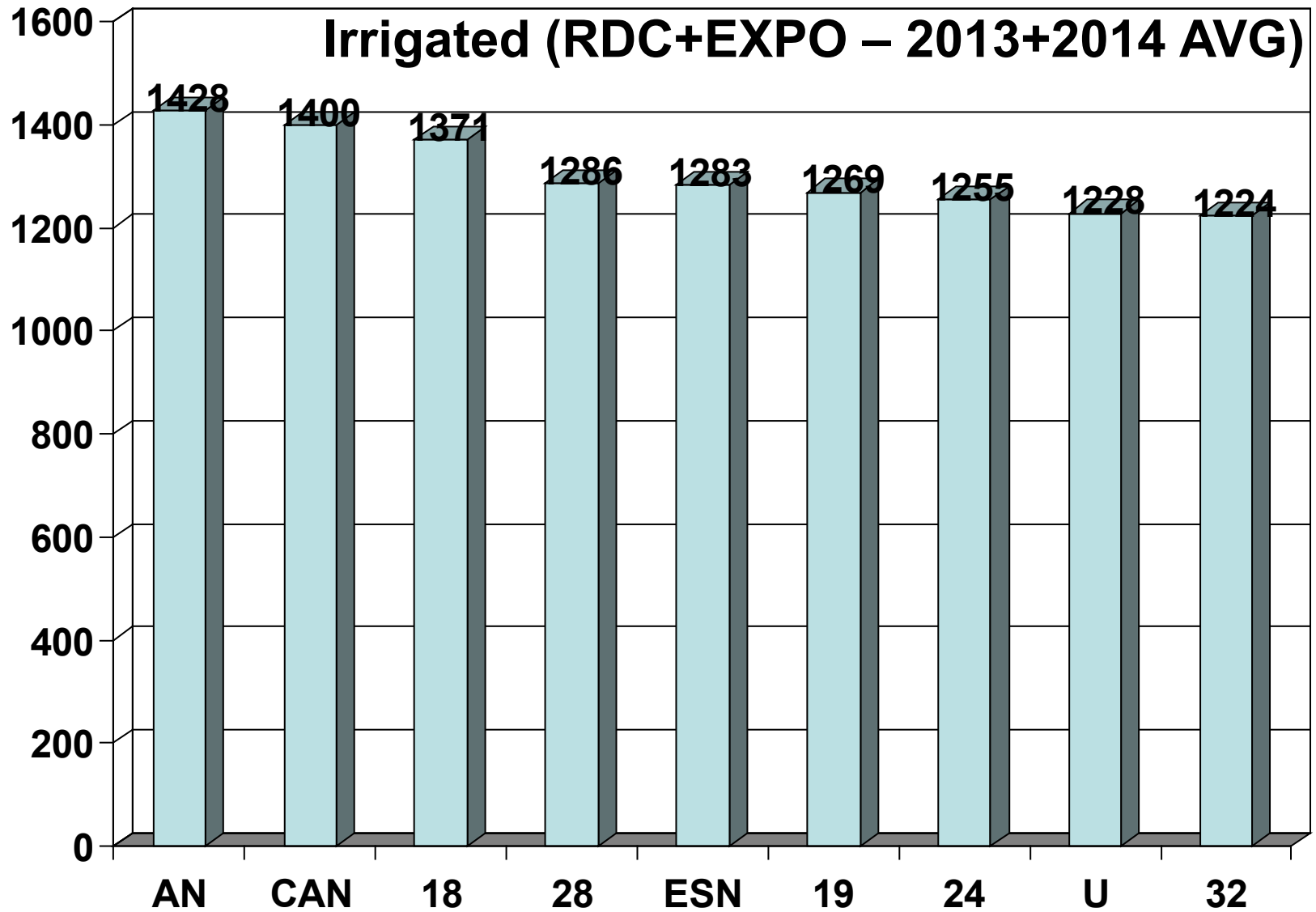
Good for Raising pH and Providing Potassium



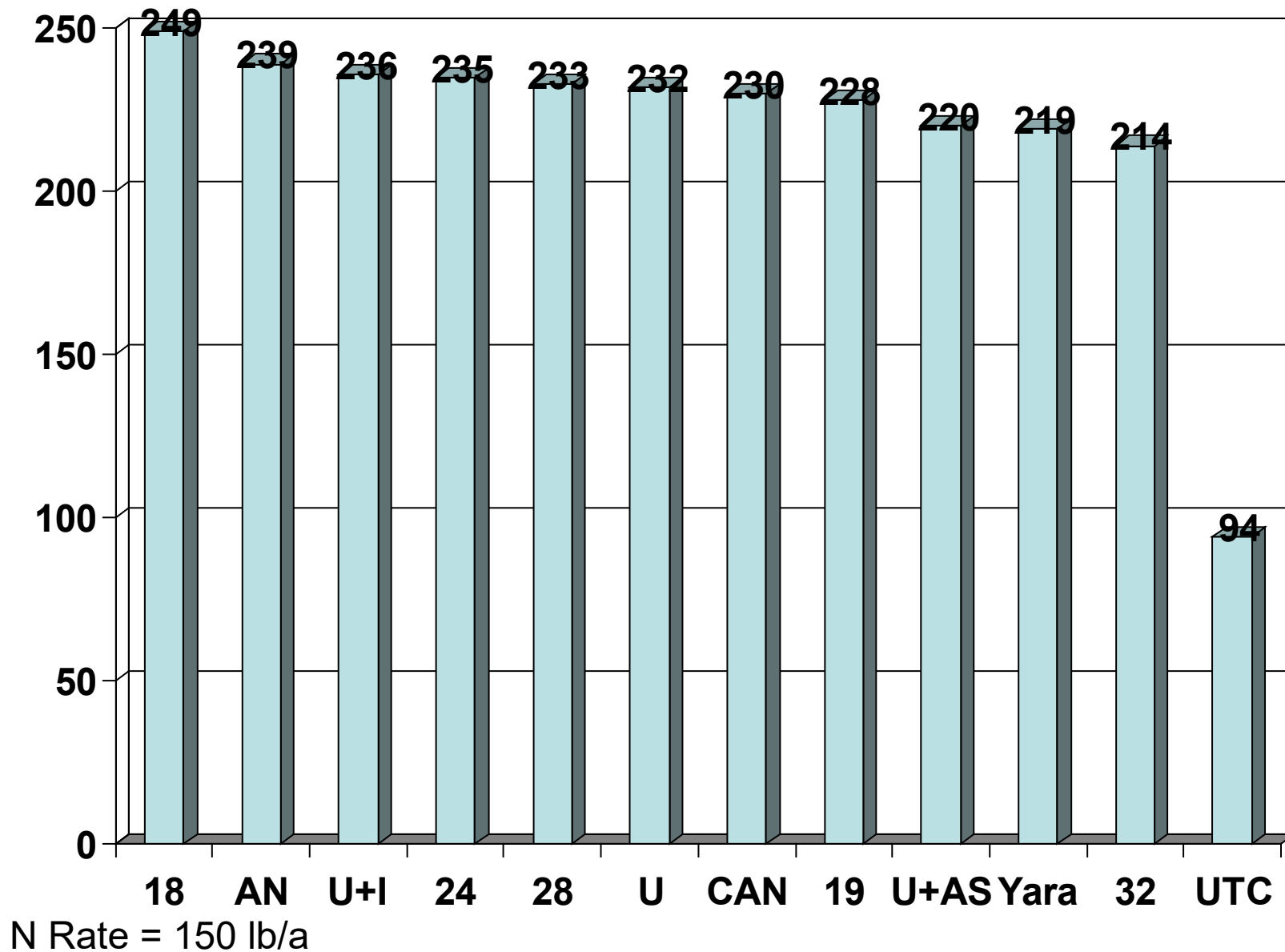
**BIG N**

**ANHYDROUS AMMONIA**

# Cotton Yield (lbs lint/a)



# Corn Yield (bu/a) Bowen N Source Study - 2015

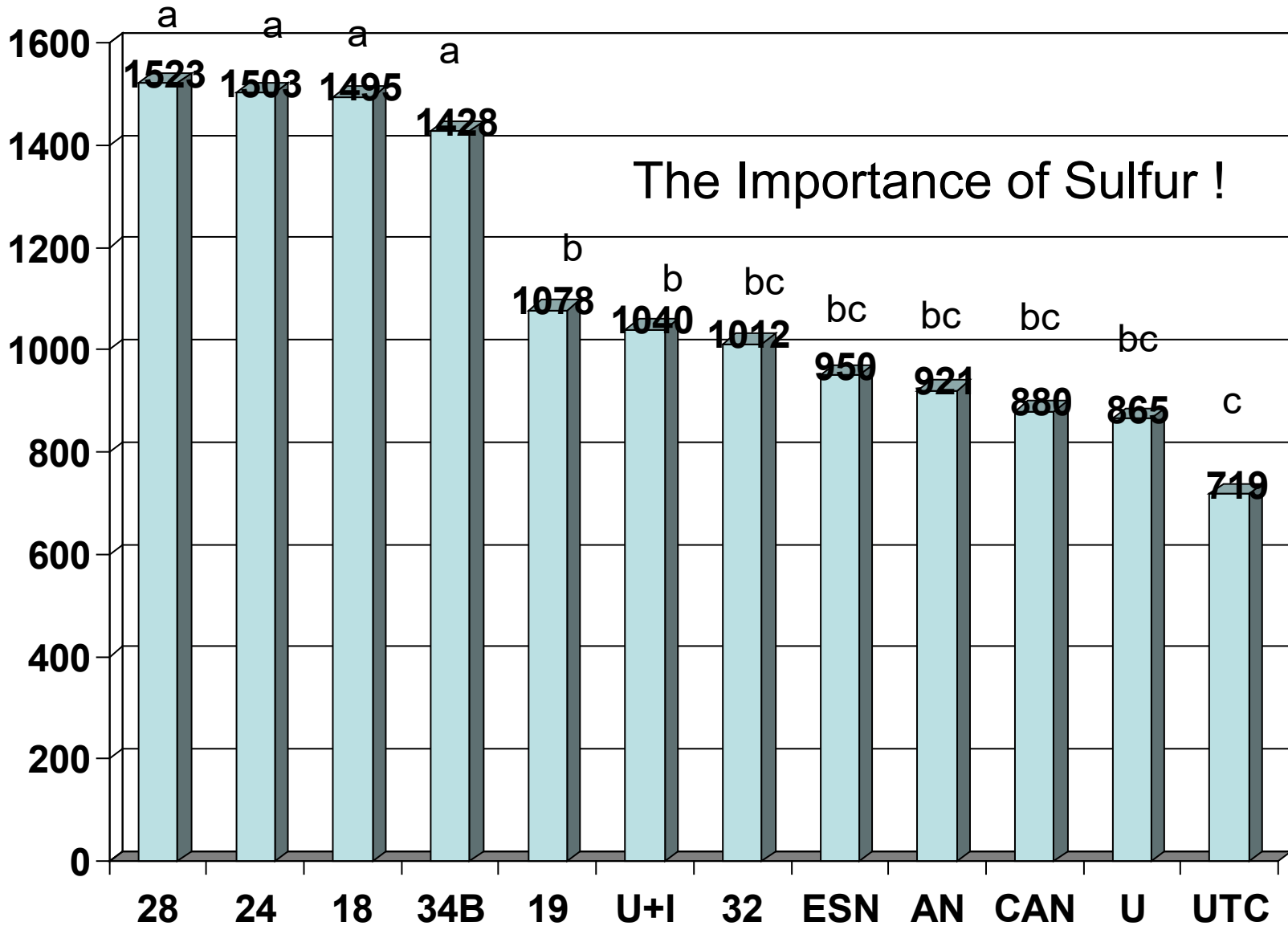








# Cotton Yield (lbs lint/a) **Stripling N Source Study - 2014**



# Soil Sampling

- Precision Ag:  
Grid vs. Zone?
- Size of Grids?
- Grid Every Year?

