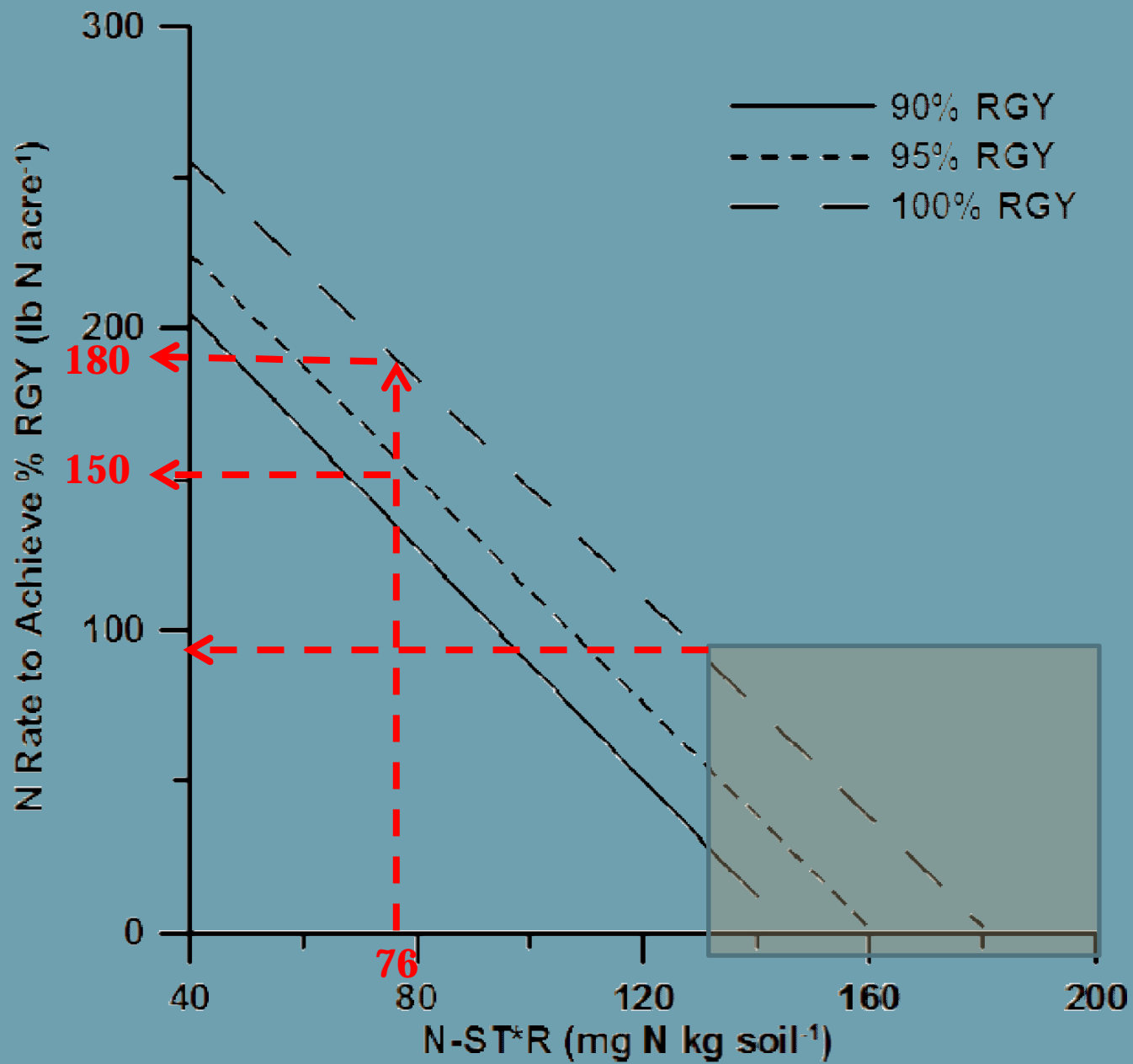
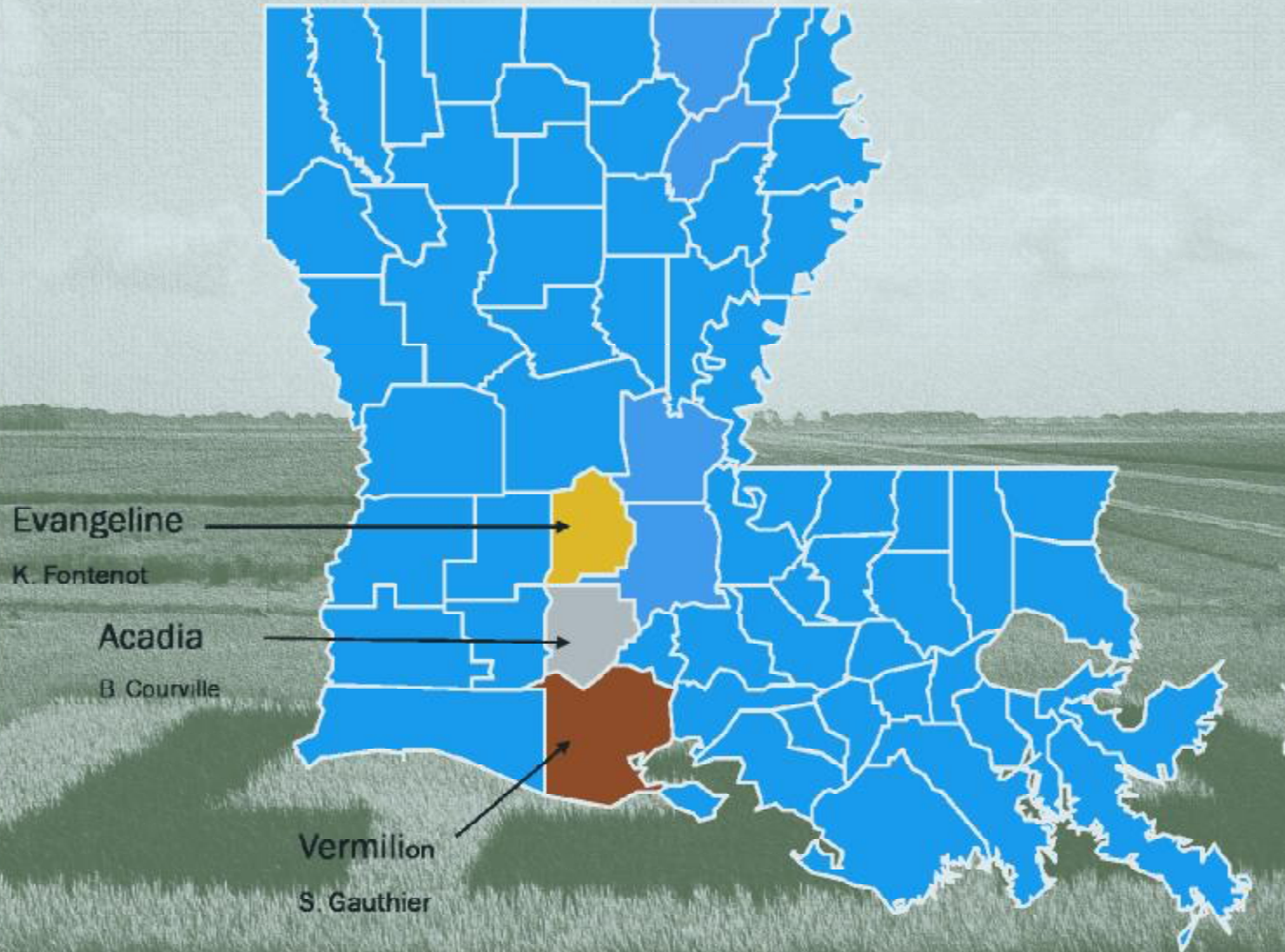


N-STaR Update: 2013 Validation Trials in Louisiana

Dustin Harrell



2012 Test Locations



Evangeline

K. Fontenot

Acadia

B. Courville

Vermilion

S. Gauthier

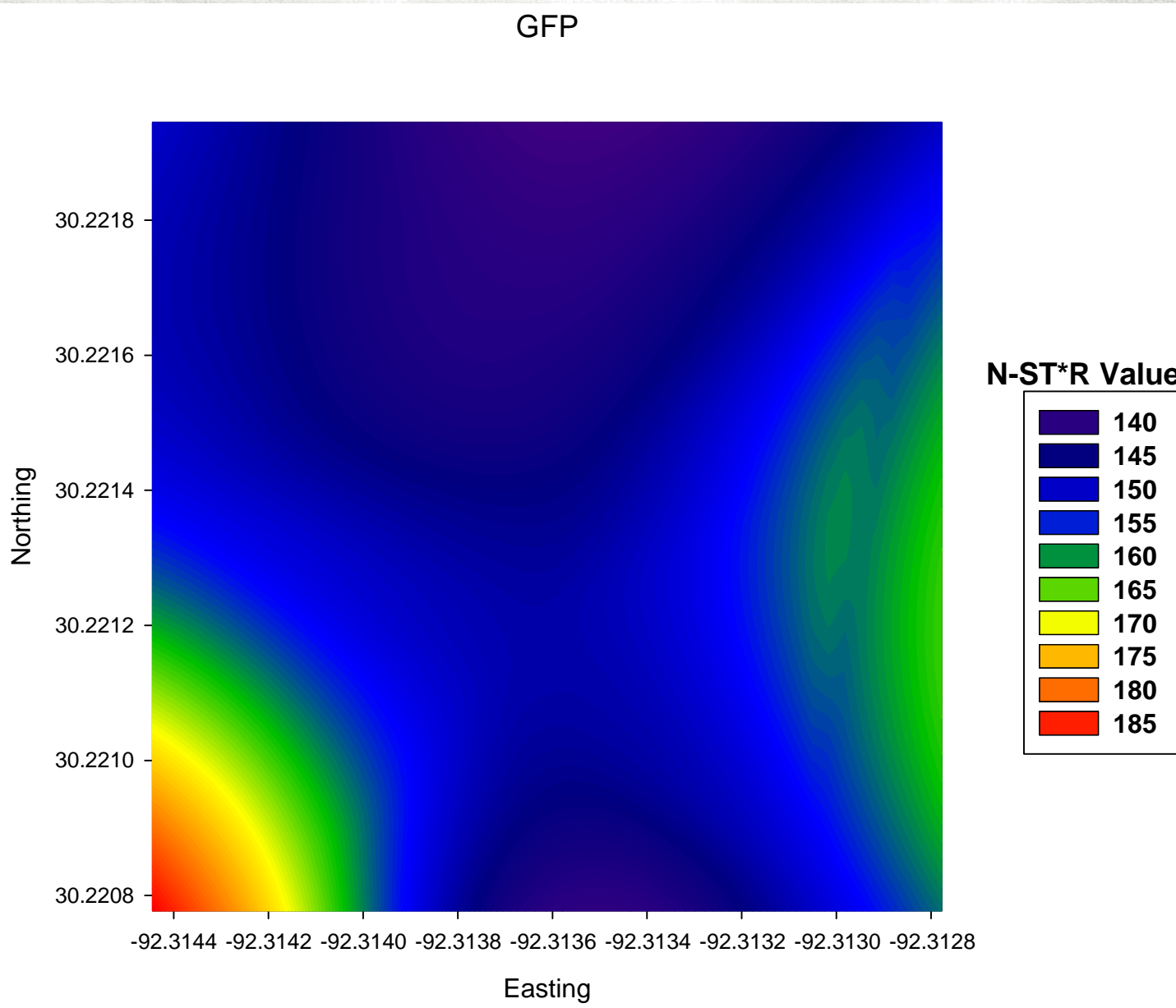
GFP Farm

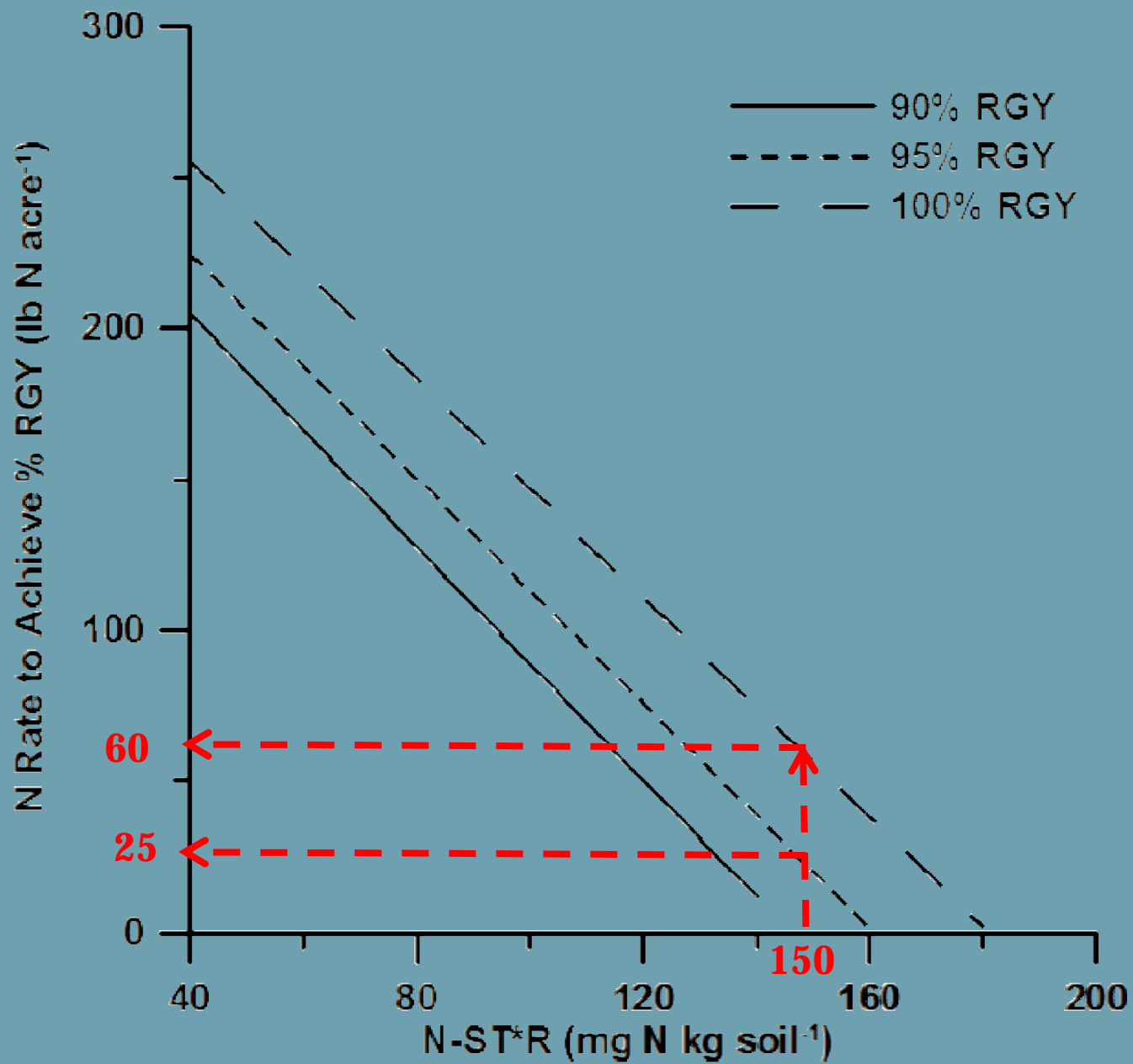


GFP Farm

- Farmer: Paul and Fred Zaunbrecher
- Location: Rayne
- Soil: Patouville – Crowley SL complex
- Variety CL131
- Seeding: dry broadcast @ 80 lbs
- History:
 - fallow (10),
 - rice-crawfish (09),
 - fallow (08)

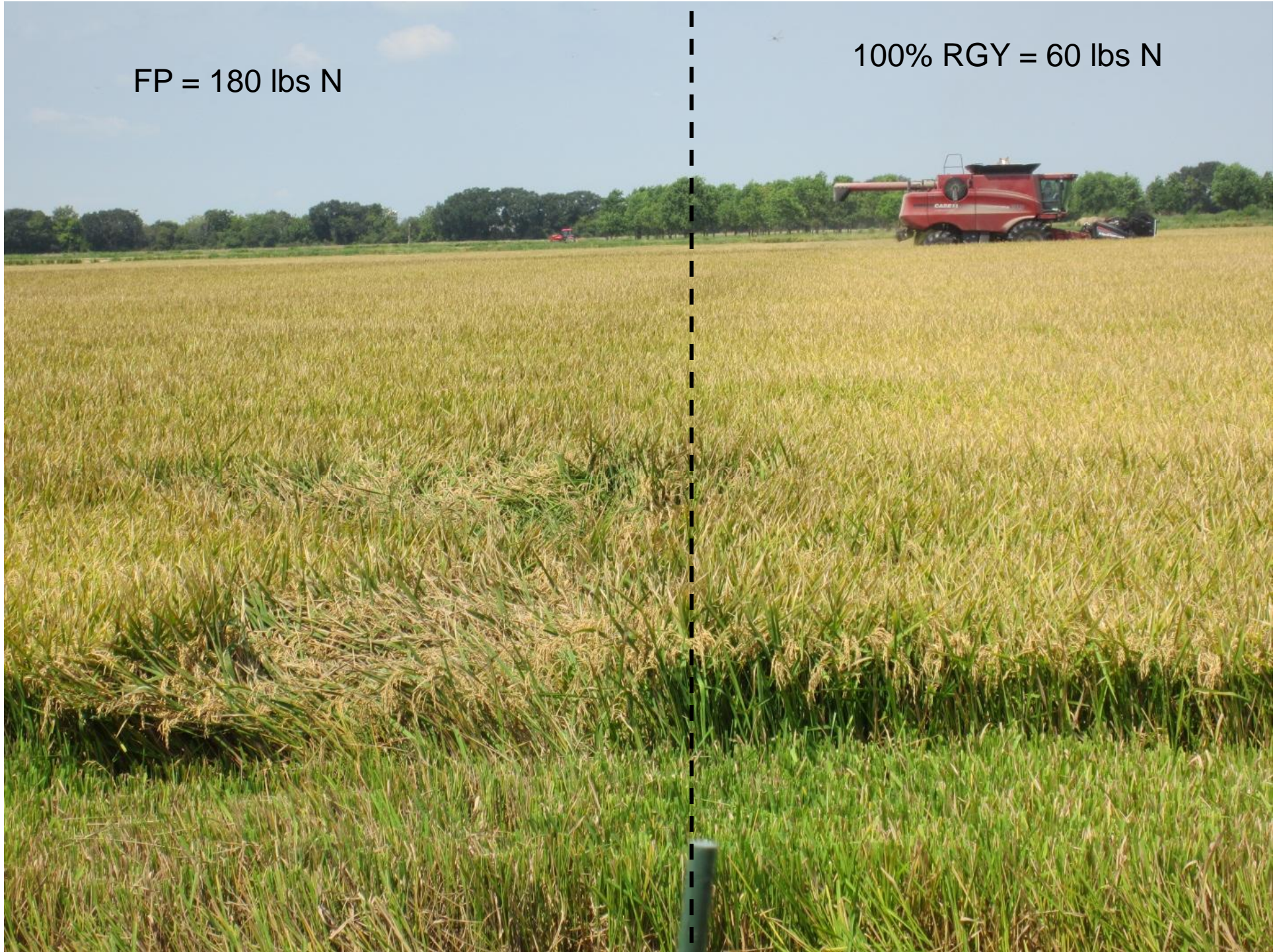
GFP





FP = 180 lbs N

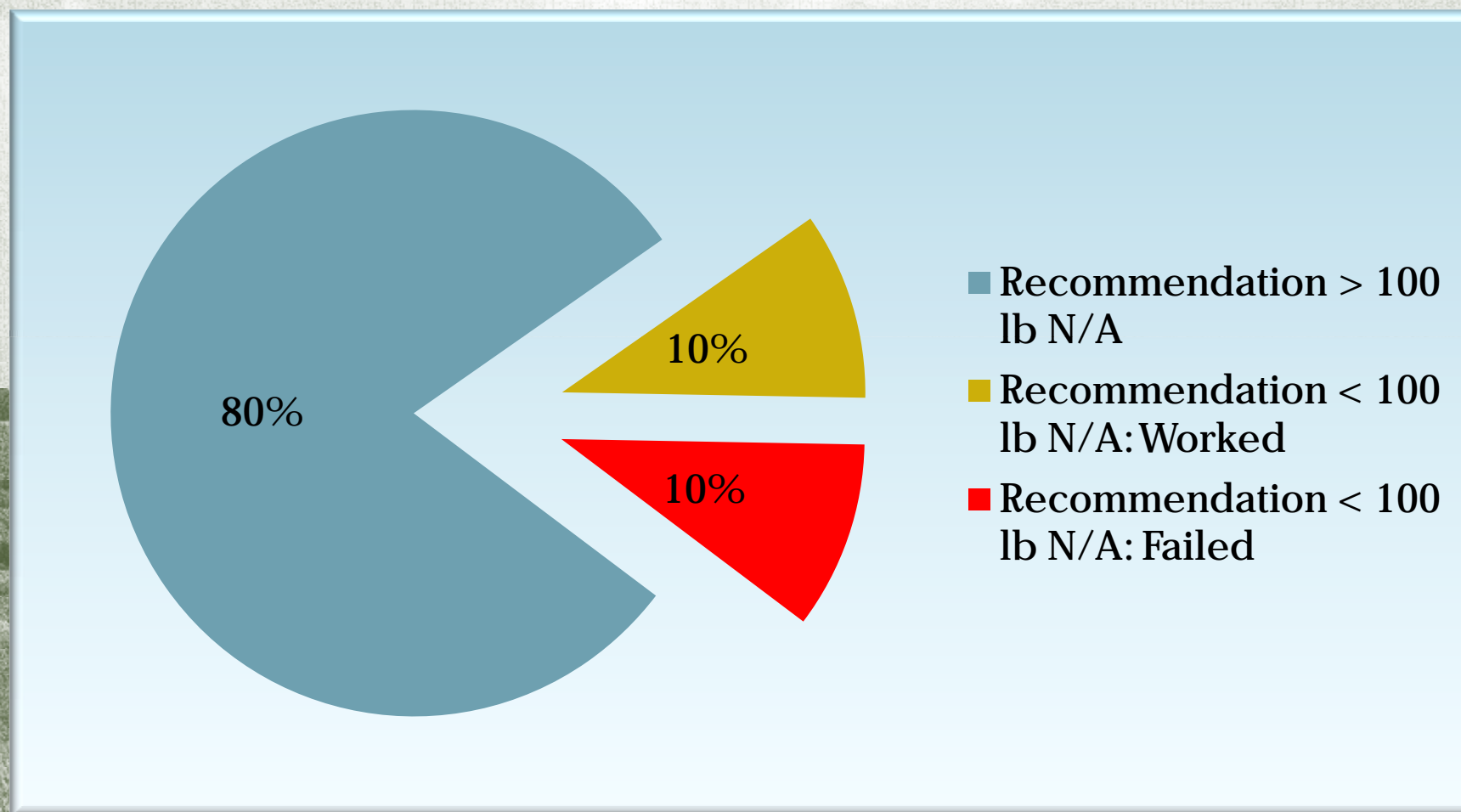
100% RGY = 60 lbs N



Location	N-STAR Recommendation	Actual N Rate	Yield	Yield Difference	N savings*	loss/gain
		lb N/A		-----bbl-----		-----\$-----
Hardee Farms						
	Farmer Practice	116	51			
	95% RGY	65	38	-13	31.62	267.38
	100% RGY	95	48	-10	13.02	216.98
F & D Farms						
	Farmer Practice	120	52			
	95% RGY	70	48	-4	31.00	61.00
	100% RGY	100	49	-3	12.40	56.60
G. F. & P. Farms						
	Farmer Practice	160	43			
	95% RGY	95	45	2	40.30	86.30
	100% RGY	125	45	2	35.00	81.00

* Assumes \$0.62 lb N and \$23/bbl rice

Update of the 2 years of N-STaR Validation Trials in Louisiana



Update of the 2 years of N-STaR Validation Trials in Louisiana

- Action:
 - Return to small plots N response trials on these types of locations
 - Recalibrate low end of recommendations
 - Inform end-users that values less than 100 lb N/A not always accurate
 - Use as information only
- Why did the test fail?
 - Very high surface N?
- Can we cap N at 100?
 - No
 - 80 lb N: ok
 - 30 lb N: not ok
- How much do values change over time?



N-ST*R Soil Test Laboratory
1366 W. Altheimer Dr.
Fayetteville, AR 72704
479-575-6752

Soil Sample Information Sheet

Name	_____	Phone	_____
Email	_____	City	_____
Address	_____	State	_____
Zip Code	_____	County	_____

Field History: Field Name or Number _____

Soil Texture: Sandy Silt Loam Clay **Soil Series** _____

Previous Crop History:	Year	Crop	If rice please list variety and estimate yield
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Projected Cultural Practices:

Variety _____

Seeding Rate _____

Estimated N Application Rate (units N/acre) _____ Preflood N Application _____

Estimated Time to Flood _____ Levees _____

****Important Note:** Soil samples for silt loam soils must be taken at a depth of 18 in. Improper sampling depth will result in an incorrect estimate of N fertilizer needs. Take 10 samples per field- **DO NOT BULK and SUBSAMPLE- send all 10 samples.**



Ratoon Stubble Management

Fungicide application did not improve yield or reduce incidence of Cercospora



Standard (16")

Low Harvest (8")

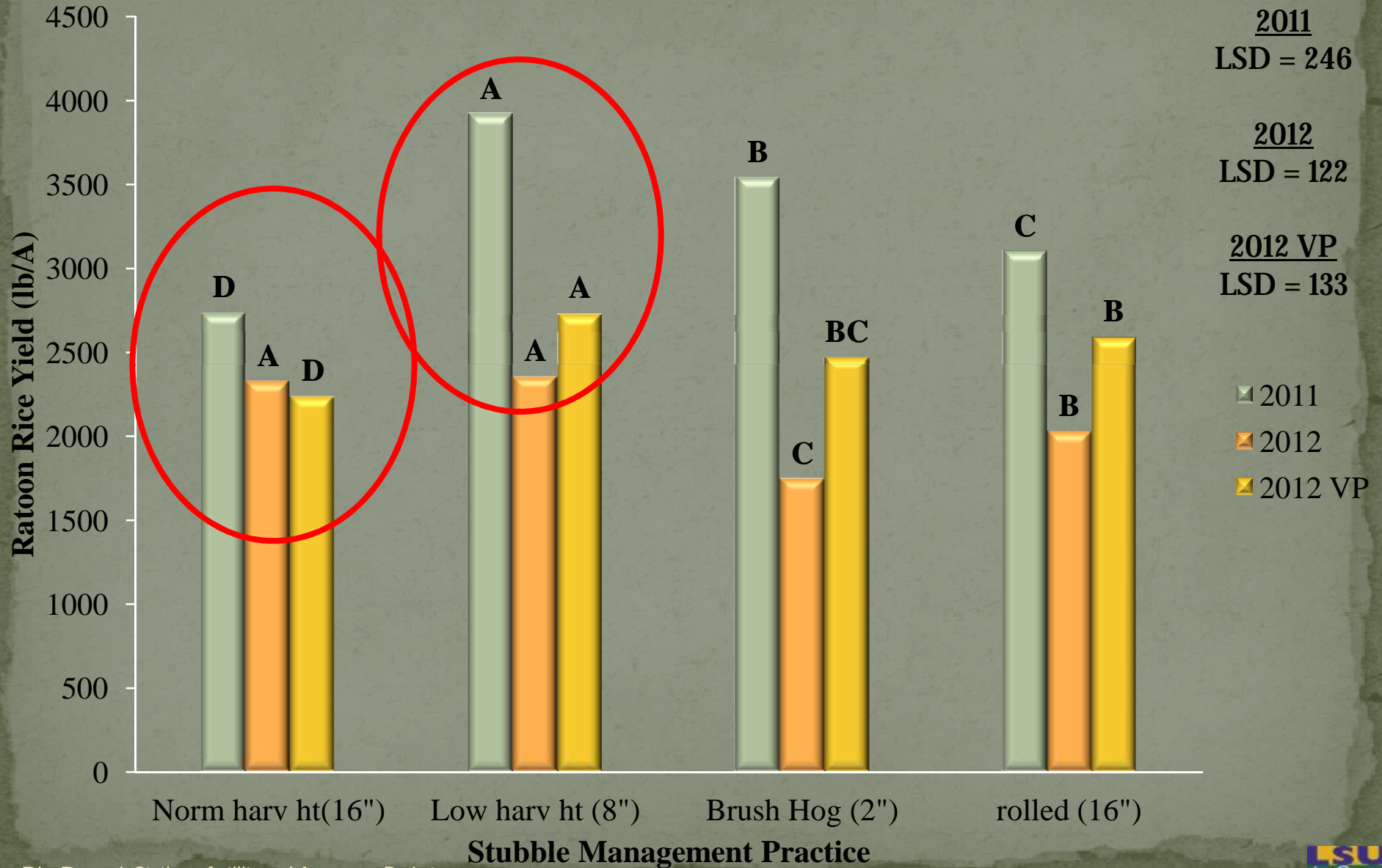
Bush Hog (2")

Rolled

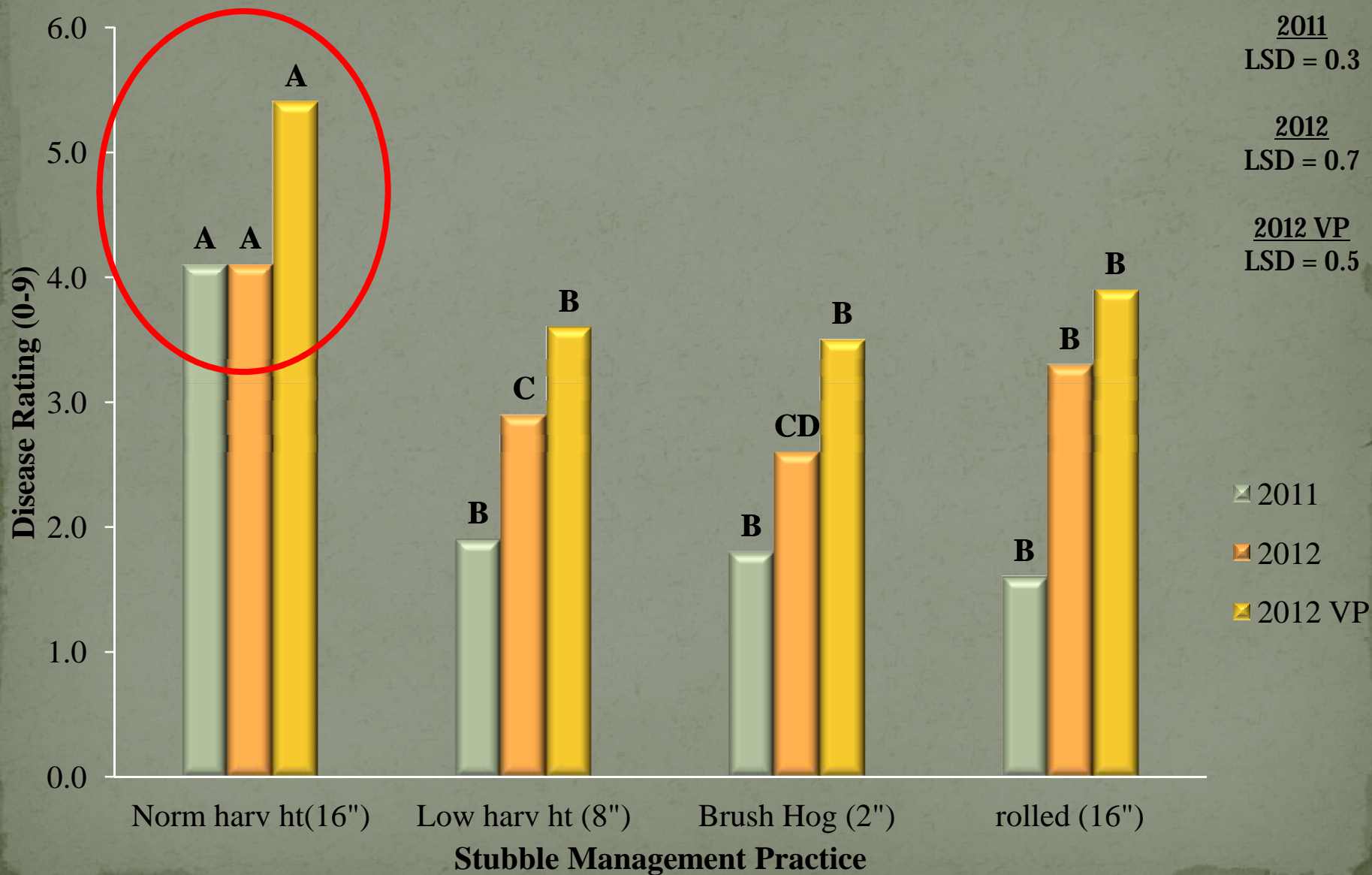
CL131 and Catahoula

Quilt XL (21 oz, 4WAH)

Effect of Stubble Management on Yield




Effect of stubble management on Cercospora



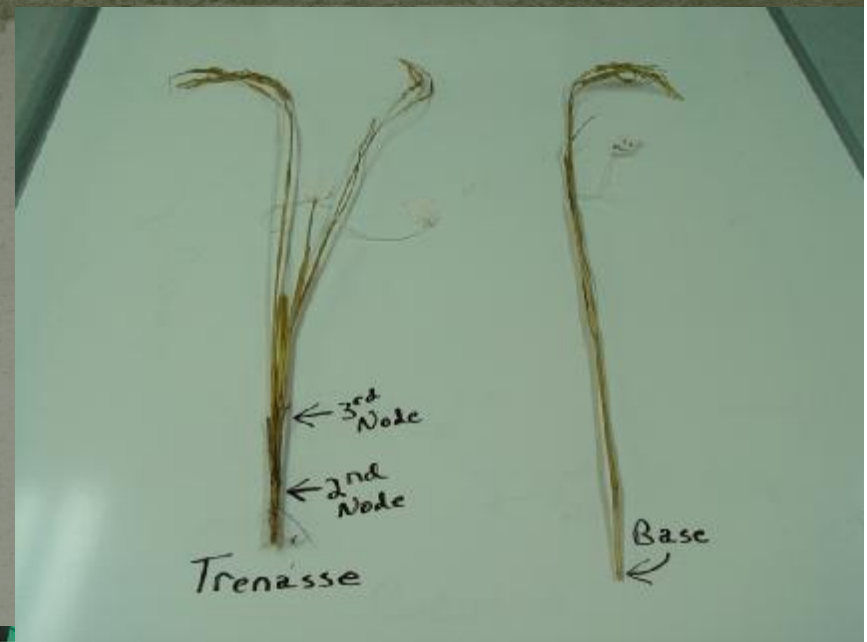
What does stubble management do to agronomics?

(8" vs. 16")

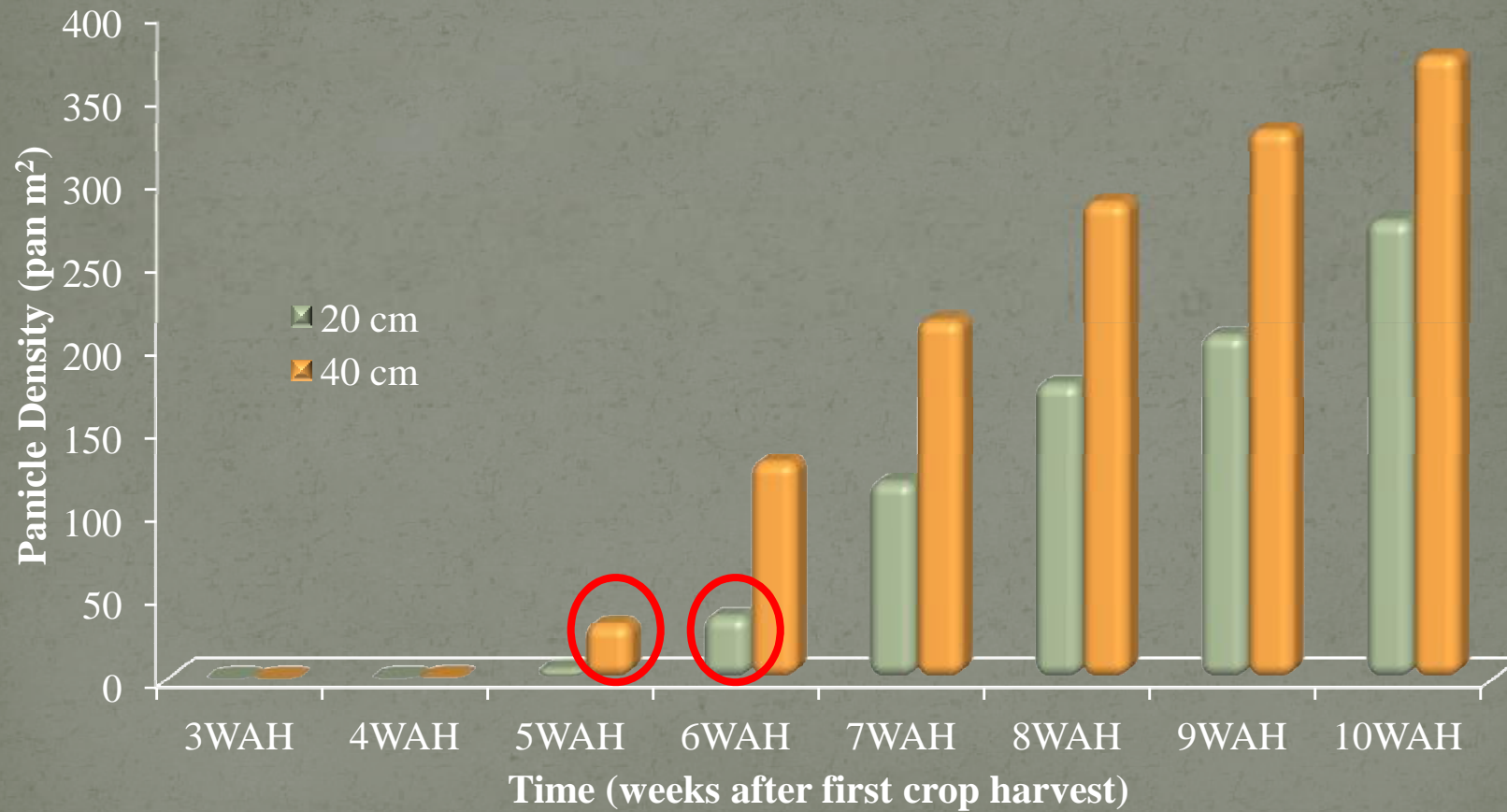
- 
- ž Every panicle tagged
 - 3 m linear section
 - Tagged each week
 - beginning at 3 weeks after harvest (3WAH).
 - 3WAH – 10WAH
 - Ratoon harvest @ week 13

ž Tagged samples were hand harvested:

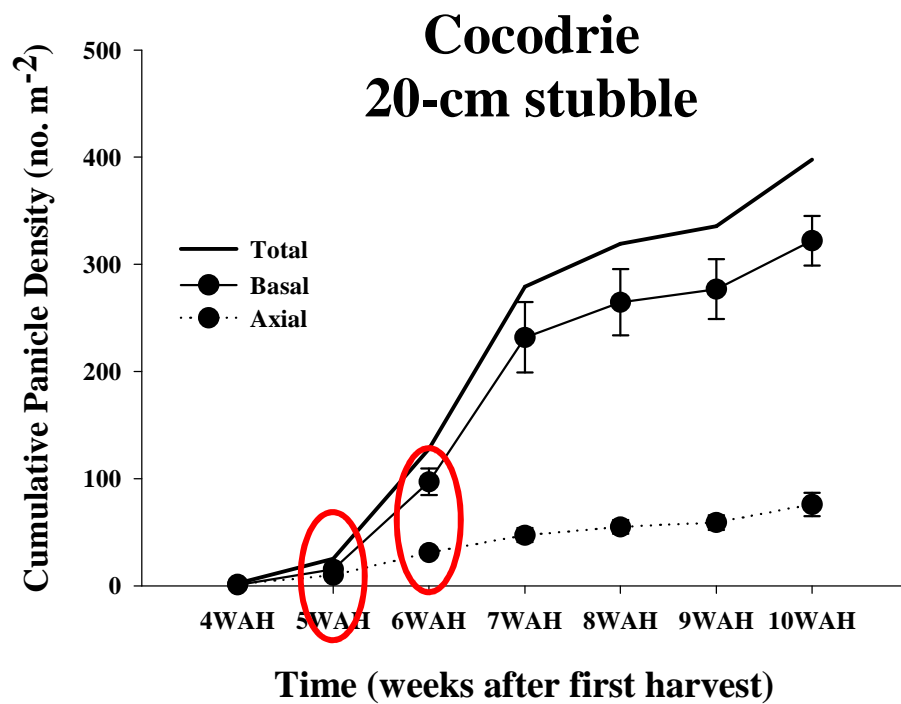
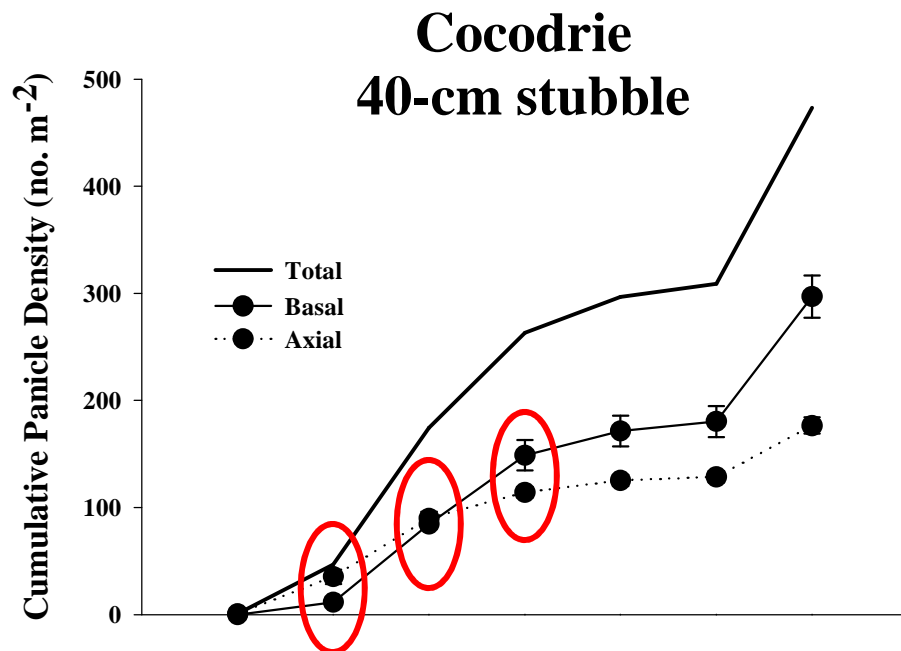
- Panicle # / week
- Wt. of panicle / week
- Point of origin
 - Axial node
 - Basal node
- Summary data 2006
- Each week 2007



Cumulative ratoon panicle emergence of Trenasse (pooled over years)



2007
Panicle emergence was also differentiated by panicle origin on a weekly basis



If the 40cm stubble treatment produced more total panicles than the 20cm treatment
Why did the 20 cm treatment produce a significant yield advantage?



Axial and Basal Panicle Weights (pooled over years)

– Axial

	F	P
Variety (V)	0.4	0.53
Stubble Height (SH)	2.9	0.09
V x SH	0.1	0.78

– Basal

	F	P
Variety (V)	2.3	0.13
Stubble Height (SH)	39.2	<.001
V x SH	0.4	0.55

	Axial	Basal
Stubble Height	g panicle ⁻¹	
20 cm	0.4	0.9
40 cm	0.5	0.7
LSD	0.2	0.1

Conclusions

- ▬ Stubble management practices
 - ▬ delay maturity
 - ▬ force regrowth from lower/crown nodes
 - ▬ Increase uniformity (grain quality)
 - ▬ Increases yield (in high yielding years)
 - ▬ Reduces Cercospora incidence