



# *New Peanut Cultivar Response to Paraquat Applications*

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# Paraquat in Peanut

- Labeled in 1988
- Replacement for dinoseb
- significant foliar injury
- Cultivars changing all the time



***Firestorm<sup>®</sup>***



Treatments applied 6 DAC; Photo at 3 DAT  
GA-02C



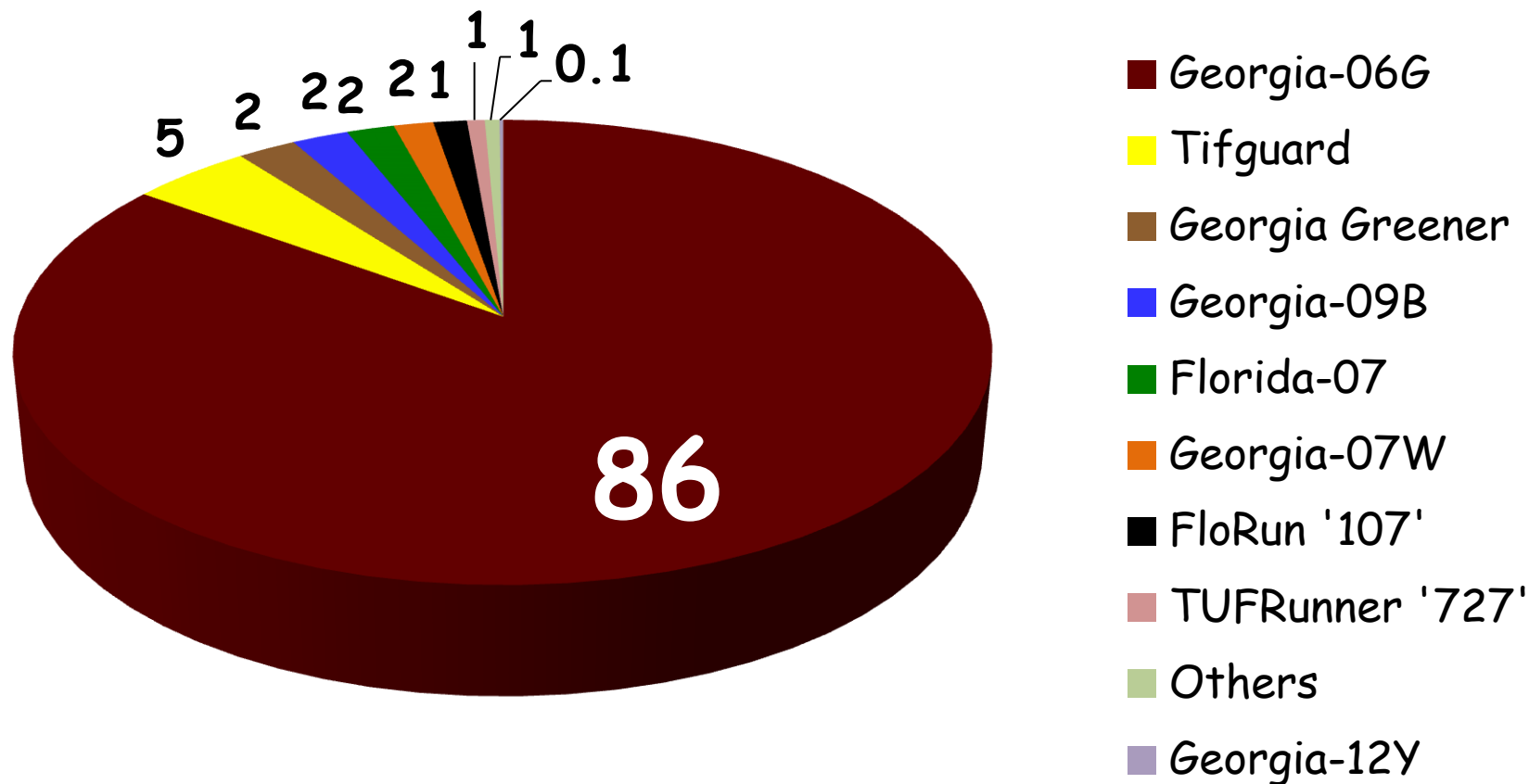
GI @ 8 oz/A +  
NIS @ 0.25% v/v



GI @ 12 oz/A + Basagran @ 8 oz/A +  
NIS @ 0.25% v/v



# Acres Planted in Seed Certification Program in SE in 2013 to Produce 2014 Seed Supply



# Materials and Methods - I



- Tests 1 and 2
  - *GA-06B, GA-09B*
  - *3 timings (15, 22, 31 DAP)*
  - *Gramoxone, Gramoxone + Storm, Gramoxone + Storm + Dual Magnum*
  - *Tifton*
- Tests 3 and 4
  - *GA-06G*
  - *Tifton, Attapulgus*
  - *Gramoxone, Storm, Dual Magnum, Cadre*
- Small-plots
- 4 replications
- weed-free
- irrigated



# Materials and Methods - II

## *Stages of Growth*

<b>Tests 1 &amp; 2</b>			
<b><u>Cultivar</u></b>	<b><u>15 DAP</u></b>	<b><u>22 DAP</u></b>	<b><u>31 DAP</u></b>
GA-06G	V4 3 in	V6 4 in	V7 4 in
GA-09B	V4 3 in	V6 4 in	V7 4 in

<b>Tests 3 &amp; 4</b>		
<b><u>Location</u></b>	<b><u>EPOST</u></b>	<b><u>POST</u></b>
Tifton	13 DAP V3 2 in	35 DAP R1 4 in
Attapulgus	18 DAP V5 3 in	39 DAP R1 9 in



# Results





# Peanut Cultivar Response to Gramoxone Application Timings - 2013

Timing (DAP)	Yield (lb/A)	
	<u>GA-06G</u>	<u>GA-09B</u>
15	6183	5818
22	6452	5856
31	6206	5723
<b>P-value</b>	<b>0.4216</b>	<b>0.8705</b>

- Averaged over 4 herbicide treatments.
- UGA Ponder Farm (Tifton)



# Peanut Cultivar Response to Gramoxone Treatments - 2013

Herbicide	Rate/A	Yield (lb/A)	
		<u>GA-06G</u>	<u>GA-09B</u>
None	--	6291	5701
Gramoxone 2SL Adept	8 oz 0.25% v/v	6218	5720
Gramoxone 2SL Storm 4SL Adept	12 oz 16 oz 0.25% v/v	6328	5813
Gramoxone 2SL Storm 4SL Dual Magnum 7.62EC	12 oz 16 oz 16 oz	6284	5962
<b>P-value</b>		<b>0.9310</b>	<b>0.8837</b>

- Averaged over 3 application timings (15, 22, and 31 DAP).
- UGA Ponder Farm (Tifton)

# GA-06 Response to Gramoxone Treatments - 2013

Herbicide	Rate/A	Timing	Yield (lb/A)	
			<u>Tifton</u>	<u>Attapulgus</u>
None	--	--	6857	7306
Gramoxone 2SL Storm 4SL Dual Magnum 7.62EC	12 oz 16 oz 16 oz	EPOST	6906	6962
Cadre 2AS Dual Magnum 7.62EC	4 oz 16 oz	POST	6754	7525
Gramoxone 2SL Storm 4SL Dual Magnum 7.62EC	12 oz 16 oz 16 oz	EPOST	6617	7124
Cadre 2AS Dual Magnum 7.62EC	4 oz 16 oz	POST		
<b>P-value</b>	--	--	<b>0.7934</b>	<b>0.8831</b>

Tests 3 & 4  
PE-12-13  
PE-13-13

# Is there a better way to evaluate yield response?

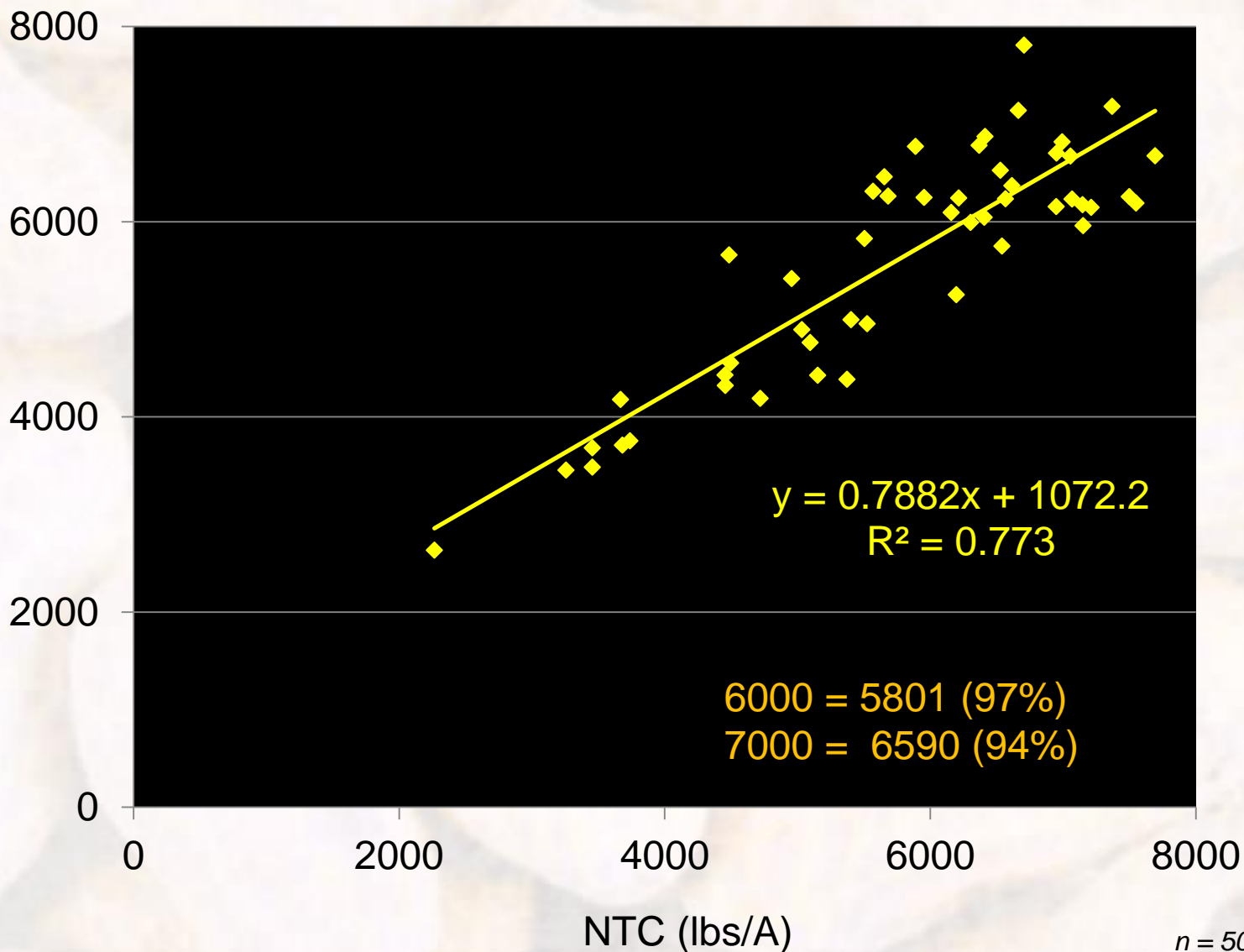


- Frequently herbicide tolerance trials are NS
- Large LSD values?



# A Comparison of Irrigated Weed-Free Peanut Yields Between NTC and Gramoxone (12 oz/A) + Storm (16 oz/A) + Dual Magnum (16-21 oz/A) Treatments in Georgia, 2011-2013.

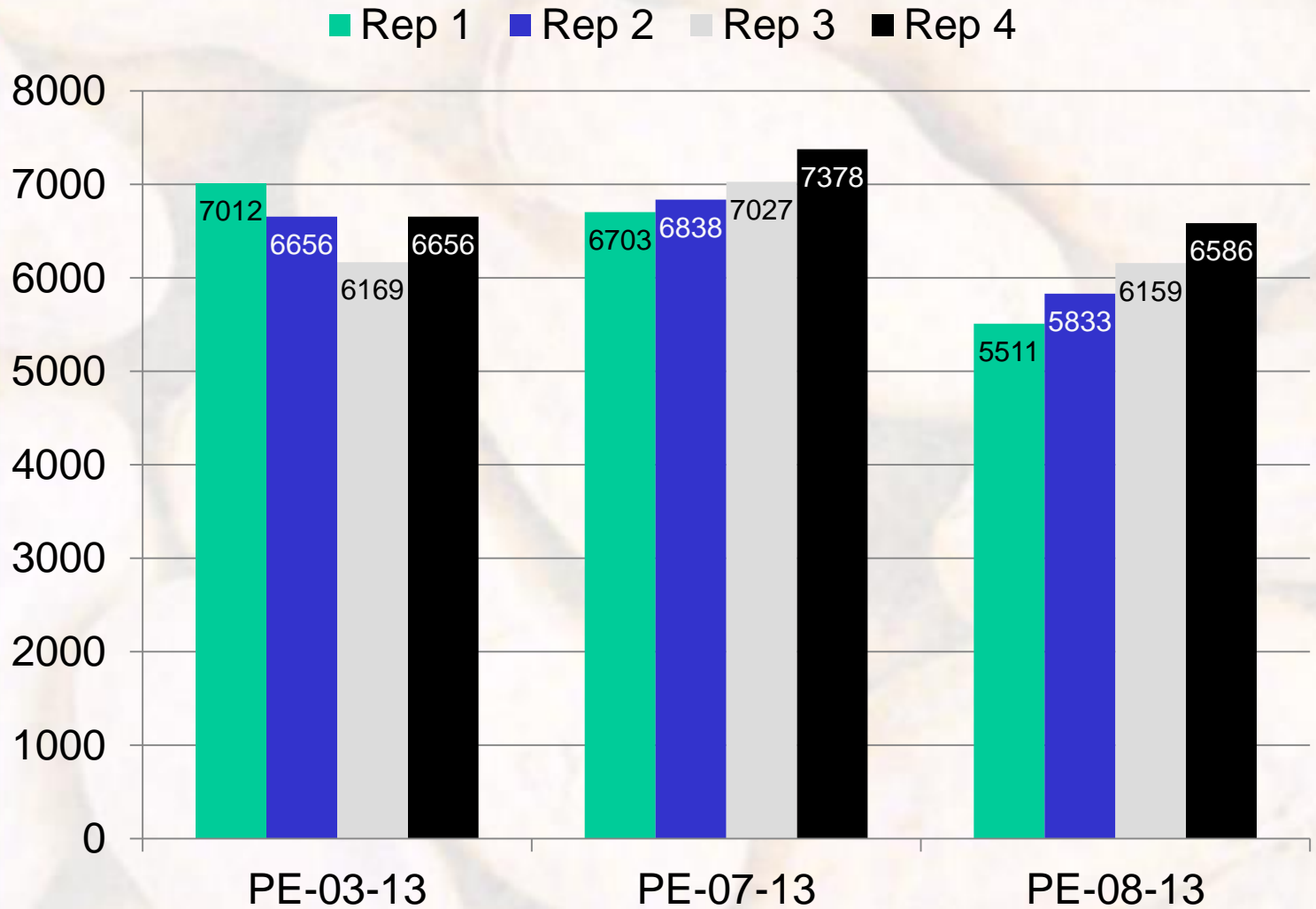
G + S + DM  
(lbs/A)



- PEA01-11 (GA-06G)
- PEA01-12 (GA-06G)
- PE-20-11 (GA-06G)
- PE-01-12 (GA-06G)
- PE-17-12 (GA-06G)
- PE-02-13 (GA-06G)
- PE-02B-13 (GA-09B)
- PE-12-13 (GA-06G)
- PE-13-13 (GA-06G)



# NTC Peanut Yield Variability (lb/A)





# Summary/Conclusions

- Leaf burn and crop stunting were observed
- Peanut yields were **not** reduced by any herbicide treatment
- New cultivars (GA-06G, GA-09B) are tolerant to common paraquat treatments.
- Dryland vs. Irrigated????



**Questions?**  
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