

# Field Identification and Management of Herbicide Resistant Johnsongrass

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# Johnsongrass



# Johnsongrass

Methods of propagation



Rhizomes

Seeds



# Johnsongrass

Prior to glyphosate-resistant crops, johnsongrass was considered to be an extremely troublesome weed.

After glyphosate-resistant crops?

- “I don’t have a problem with johnsongrass anymore.”



# Johnsongrass Fights Back!

2008:

- Complaints about glyphosate not working
  - Multiple applications of labeled rates
  - Multiple applications of 2x or more rates

2009:

- It spread across a wider geographic region

2010:

- It continues to spread



# Johnsongrass Fights Back!

2007 and earlier

- I suspect that glyphosate was applied
  - As the only herbicide for weed control
  - At lower than labeled rates
- Classic example of how resistant is begins

# Moving it around



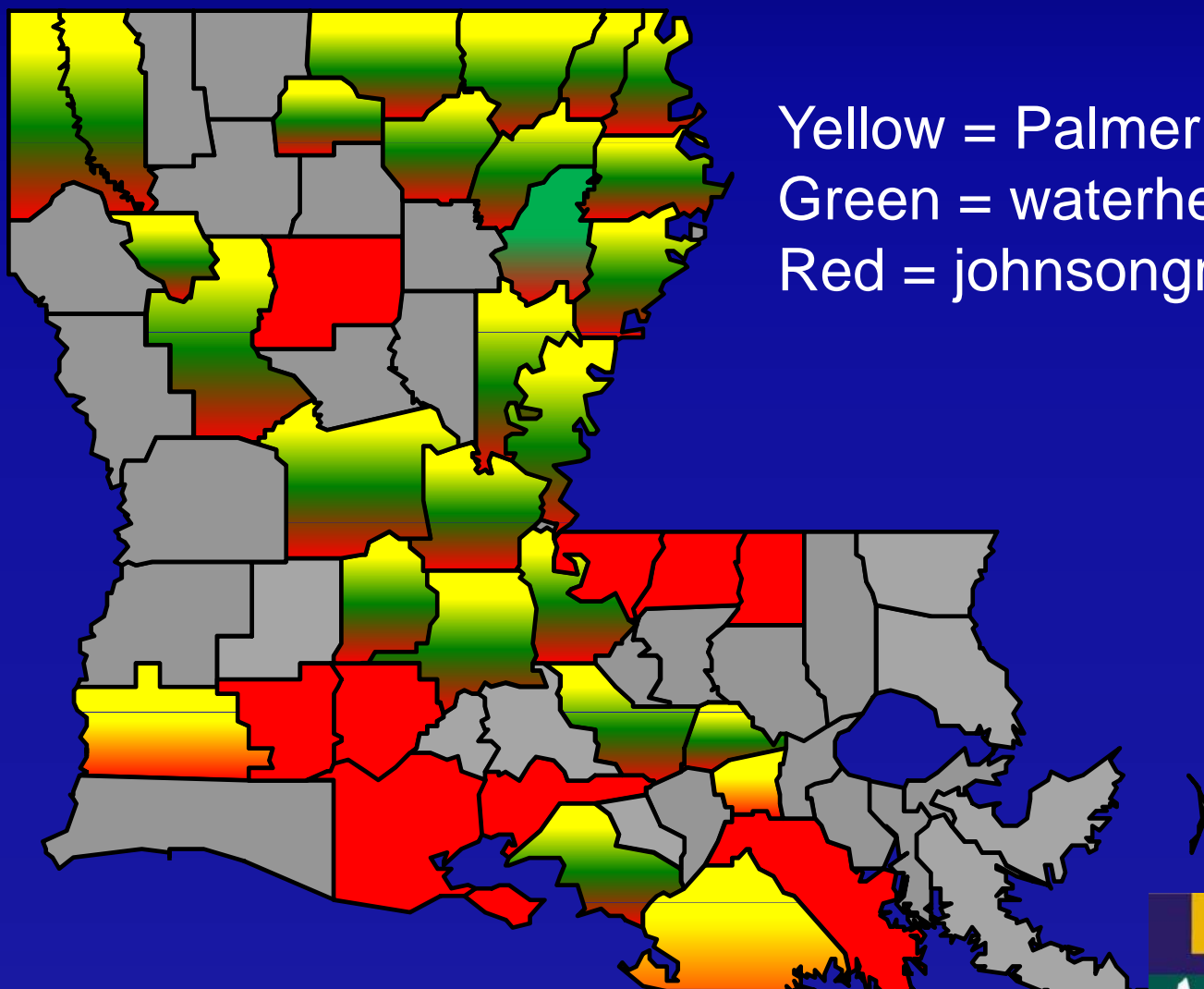


# What Louisiana is dealing with!



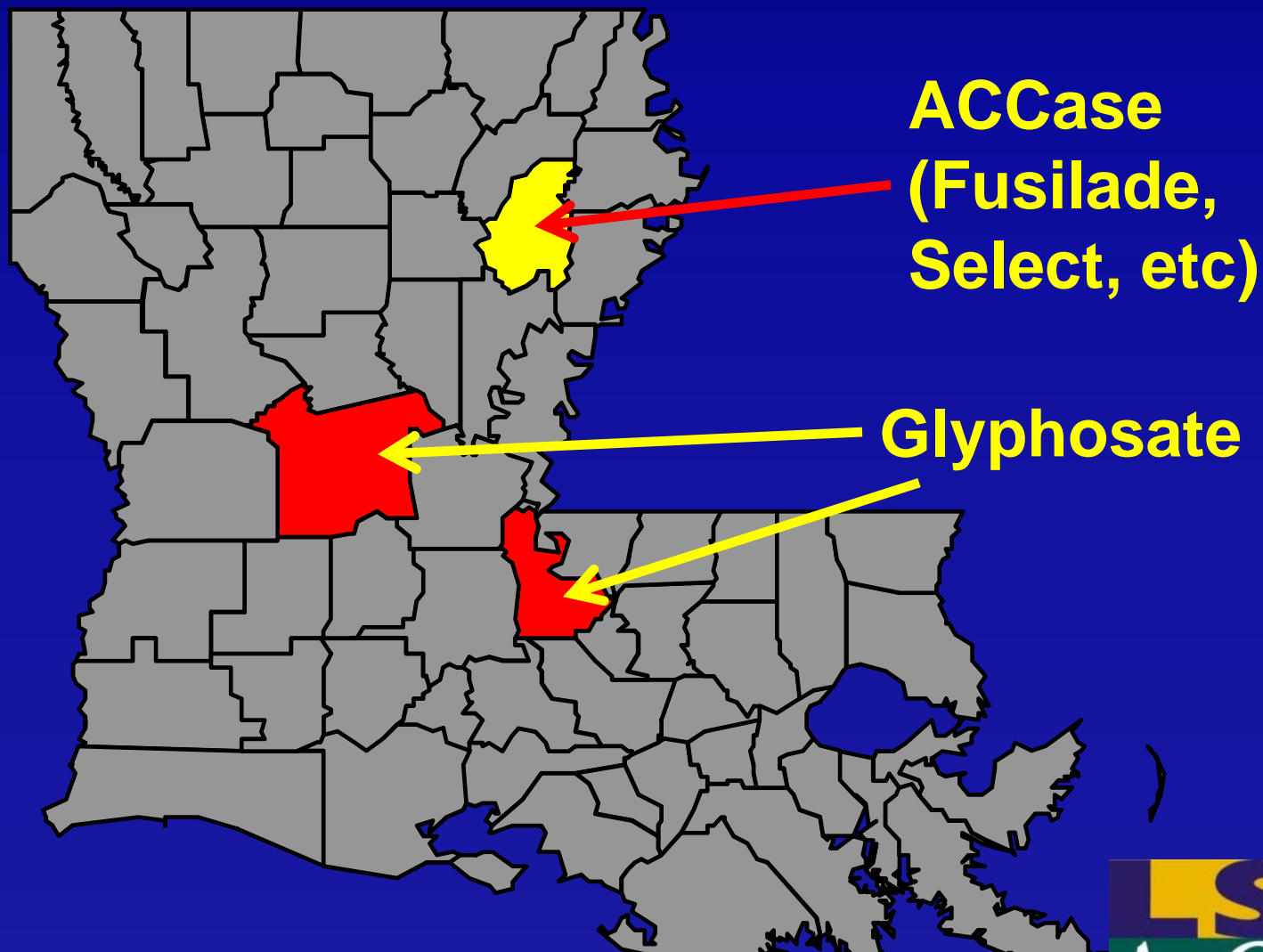


# 2010 County Agent Survey



Yellow = Palmer amaranth  
Green = waterhemp  
Red = johnsongrass

# Resistant johnsongrass distribution



# Resistance Research

Dr. Jim Griffin and myself – LSU AgCenter

- Dose response experiments
- Field management experiments

Dr. Nilda Burgos – University of Arkansas

- Dose response experiments
- Genetic experiments

Our research is indicating high levels of resistance





**How can we get out of this mess?**



# Fight it in all crops!

Corn

– Don't use only glyphosate + atrazine!

PRE	POST (V3 or V4)	Rate	% Control
s	Ignite	5 oz/A fb 22 oz/A	95
s + Aatrex	Ignite	5 oz/A + 1 qt/A fb 22 oz/A	97
	Capreno	3 oz/A	98
	Ignite	22 oz/A	85
	Capreno + Aatrex	3 oz/A + 1 qt/A	97
	Ignite + Aatrex	22 oz/A + 1 qt/A	92
	Resolve Q	1.25 oz/A	80
	Steadfast Q	1.5 oz/A	83

# CORN



Nontreated



Corvus fb Ignite



Corvus + Aatrex fb Ignite





# CORN



Nontreated



Capreno + Aatrex



Ignite + Aatrex



# Fight it in all crops!

## Cotton and Soybean

- PRE's?
- Graminicides
  - Watching for resistance
- Ignite
  - Liberty Link cotton and soybean
  - Widestrike cotton
    - NOT AN ENDORSEMENT OF THIS PRACTICE!



# COTTON



Nontreated



Command @ 3.3 pt/A



Prowl H2O @ 1 qt/A



Allicam @ 1.9 lb/A



Cotoran @ 1.2 qt/A



Direx @ 1.5 pt/A





# COTTON





# COTTON





# COTTON

Nontreated





# Status in Louisiana

## Corn:

- Products such as Capreno, Accent Q, Resolve Q

## Cotton and Soybean

- Graminicides
- Glyphosate + graminicide
  - High prices of soybean will cause continued pressure on glyphosate and graminicides
- Ignite
  - Liberty Link cotton an option with good varieties
  - Liberty Link soybean has not been widely adopted

Glyphosate resistance is very probable



**QUESTIONS?**

**FSU**

**Ag Center**

research & Extension