

Cotton Weed Control Issues

DONNIE MILLER

NORTHEAST RES. STATION

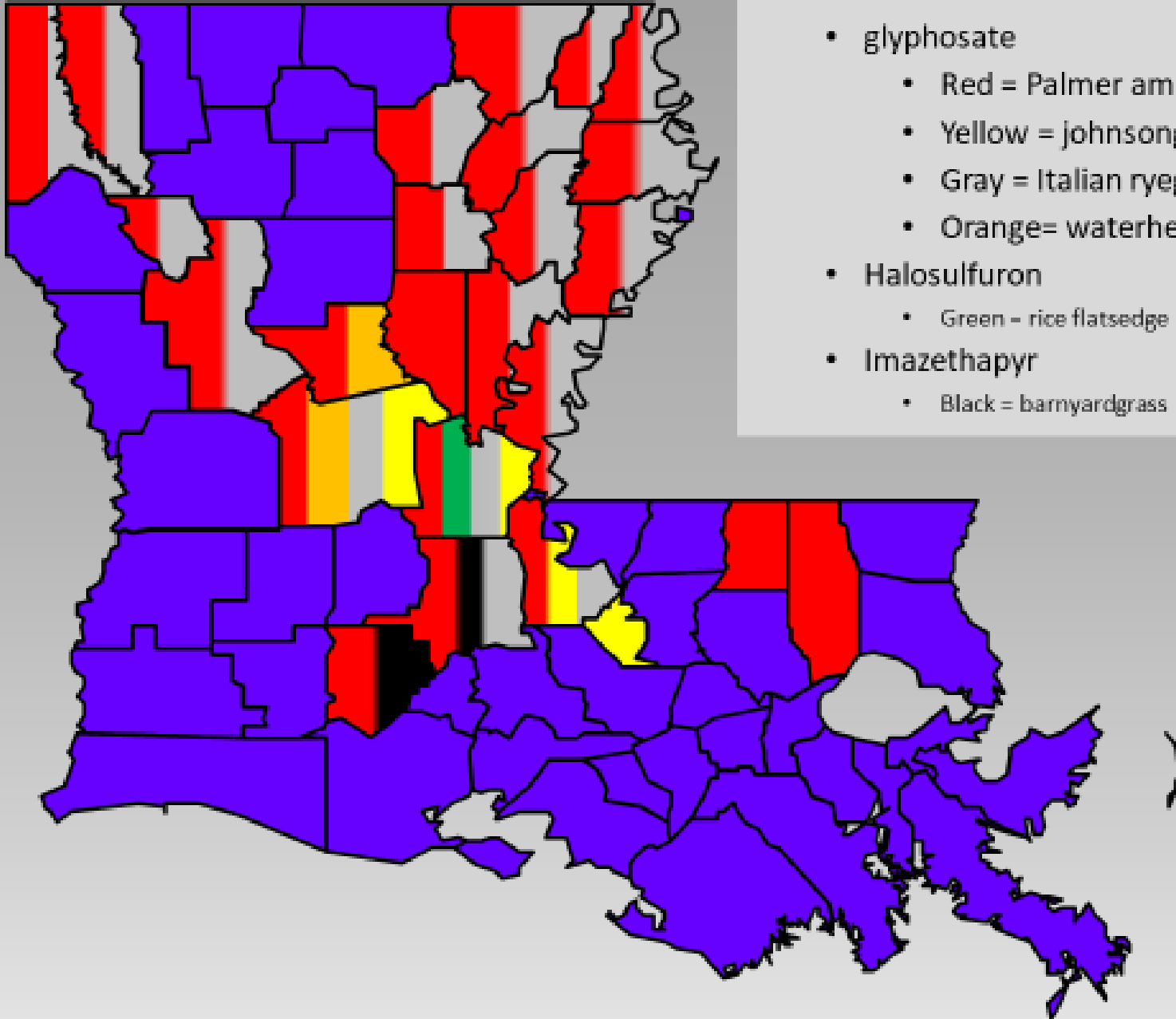


Extremely competitive with most agronomic commodities,
including: corn, peanut, soybean, and cotton



Confirmed Herbicide Resistance

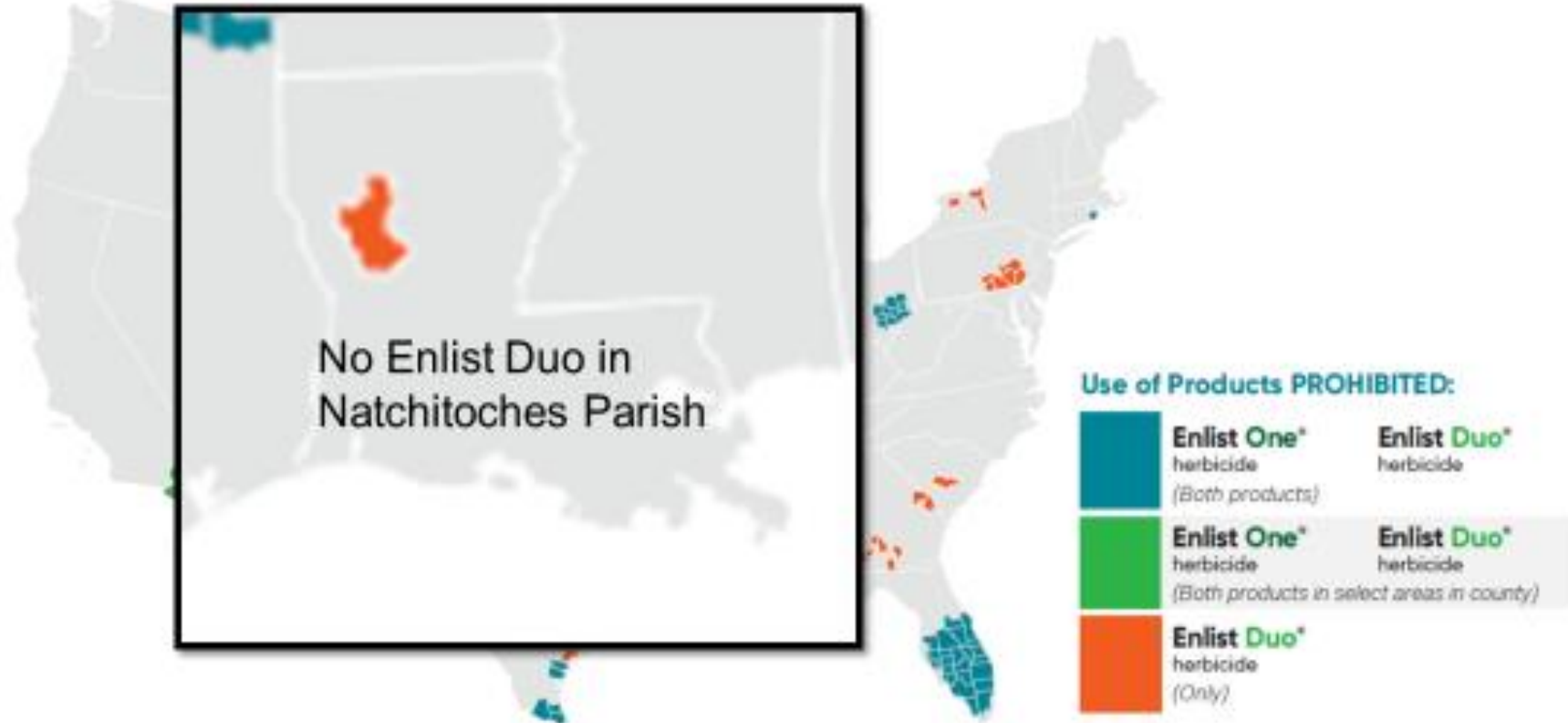
- glyphosate
 - Red = Palmer amaranth
 - Yellow = johnsongrass
 - Gray = Italian ryegrass
 - Orange = waterhemp
- Halosulfuron
 - Green - rice flatsedge
- Imazethapyr
 - Black = barnyardgrass



ESA impact on Enlist products

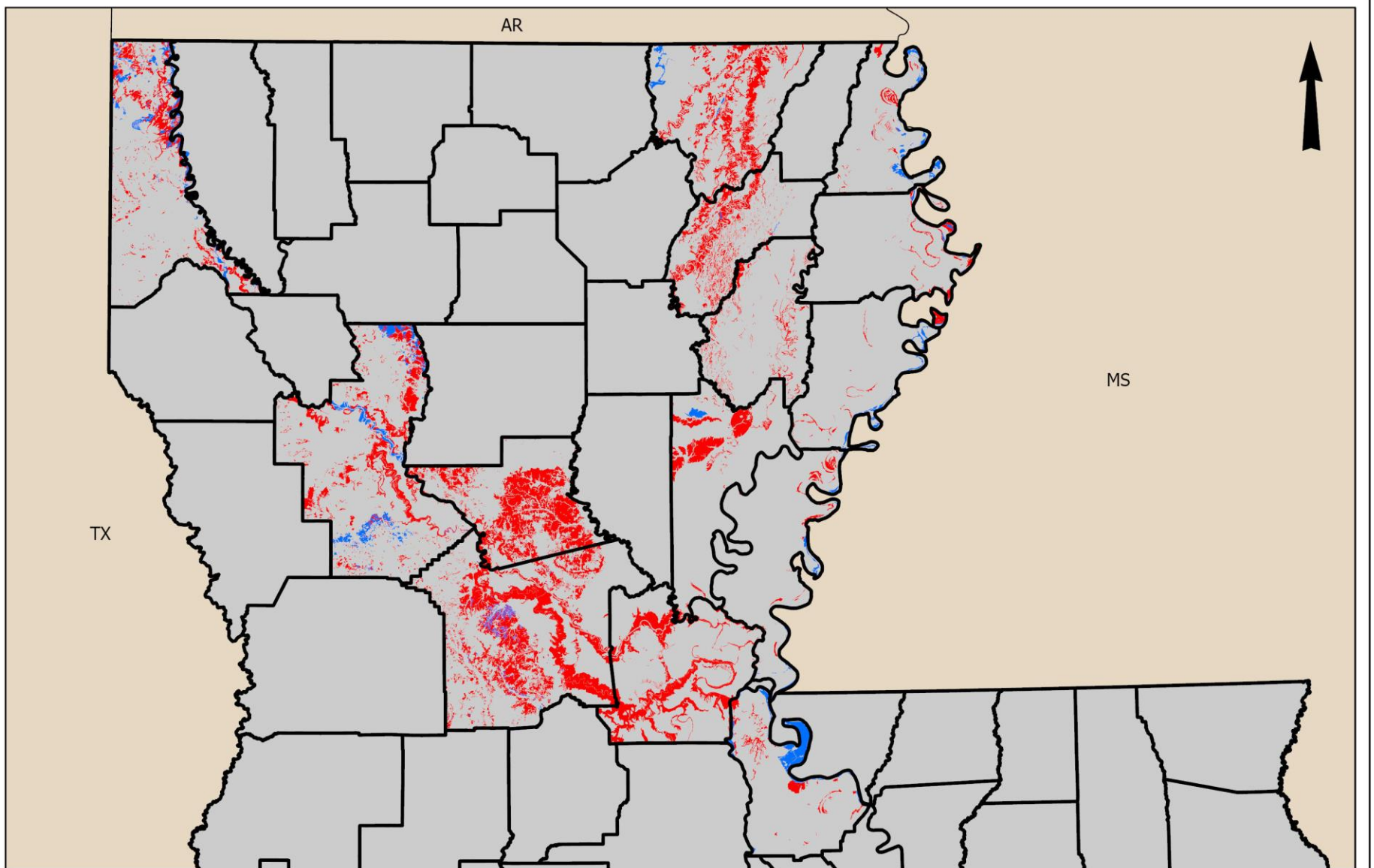
Enlist One[®] and Enlist Duo[®] herbicides county restrictions:

The map and county lists below represent county restrictions found on the federal Enlist One[®] and Enlist Duo[®] herbicide registrations as of January 11, 2022.






Diuron and Fluometuron Future

- ▶ All pesticides in US registered by EPA
- ▶ Under FIFRA reviewed every 15 yrs
- ▶ Endangered Species Act and Endocrine Disruptor Screening Program
- ▶ Both in PID (Proposed Interim Decision Phase)
- ▶ Identified potential cancer risks from food and drinking water exposure and residential handler paint exposure
- ▶ EPA cannot make an aggregate safety finding for diuron
- ▶ PID for diuron proposes termination of nearly all conventional uses (including all food/feed uses and conventional herbicide use) and proposed reduction rate for all paints and building material products.
- ▶ PID for fluometuron proposes to eliminate use of soils that are hydrologic groups A and B, which are less than 20% clay content.

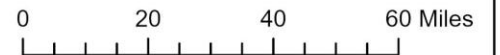


HSG

-  A & A/D
-  B & B/D
-  Parish Boundary

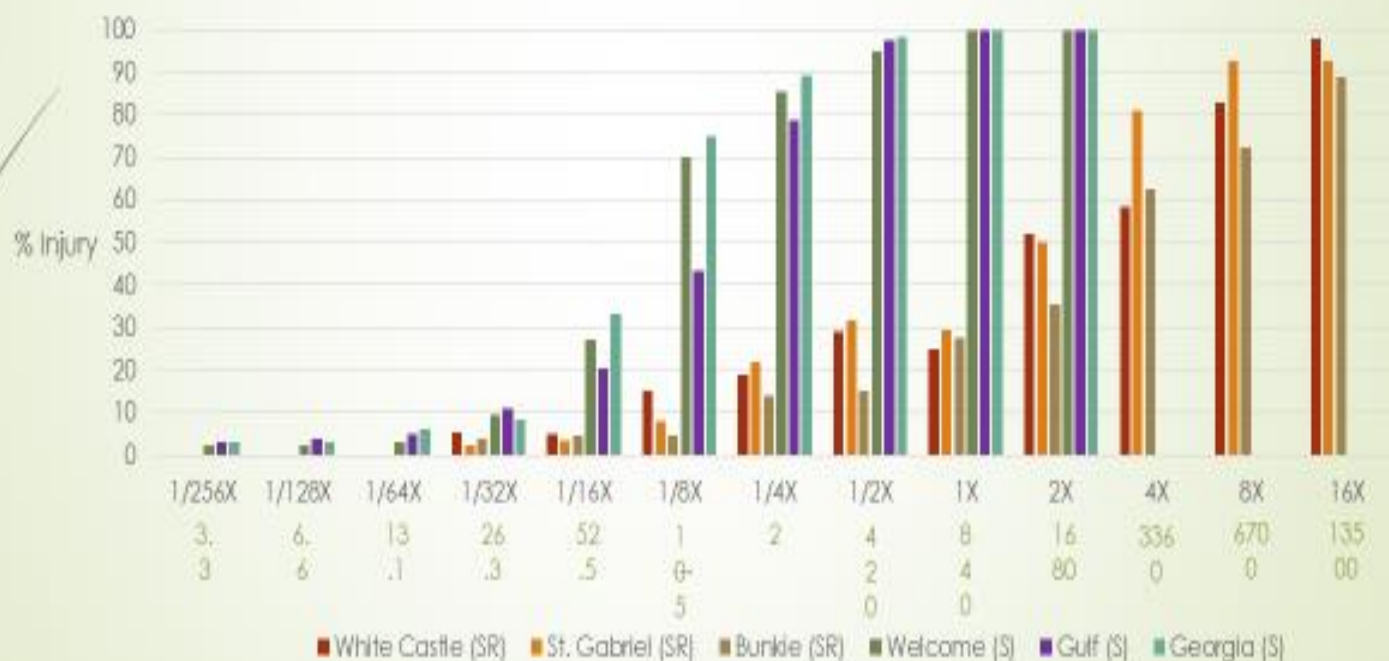
Hydrologic Soil Group (HSG) Cotton Acreage Louisiana

HSG Source: USDA-NRCS





Italian Ryegrass Injury 18 Days after Application with Paraquat



Italian Ryegrass Control

- ▶ Resistance limiting POST options
- ▶ Cover crop tolerance and herbicides in fall to inhibit Ryegrass emergence and growth
- ▶ Command, S-metolachlor, Zidua,
- ▶ Tolerance of cereal rye to metribuzin and Command applied POST

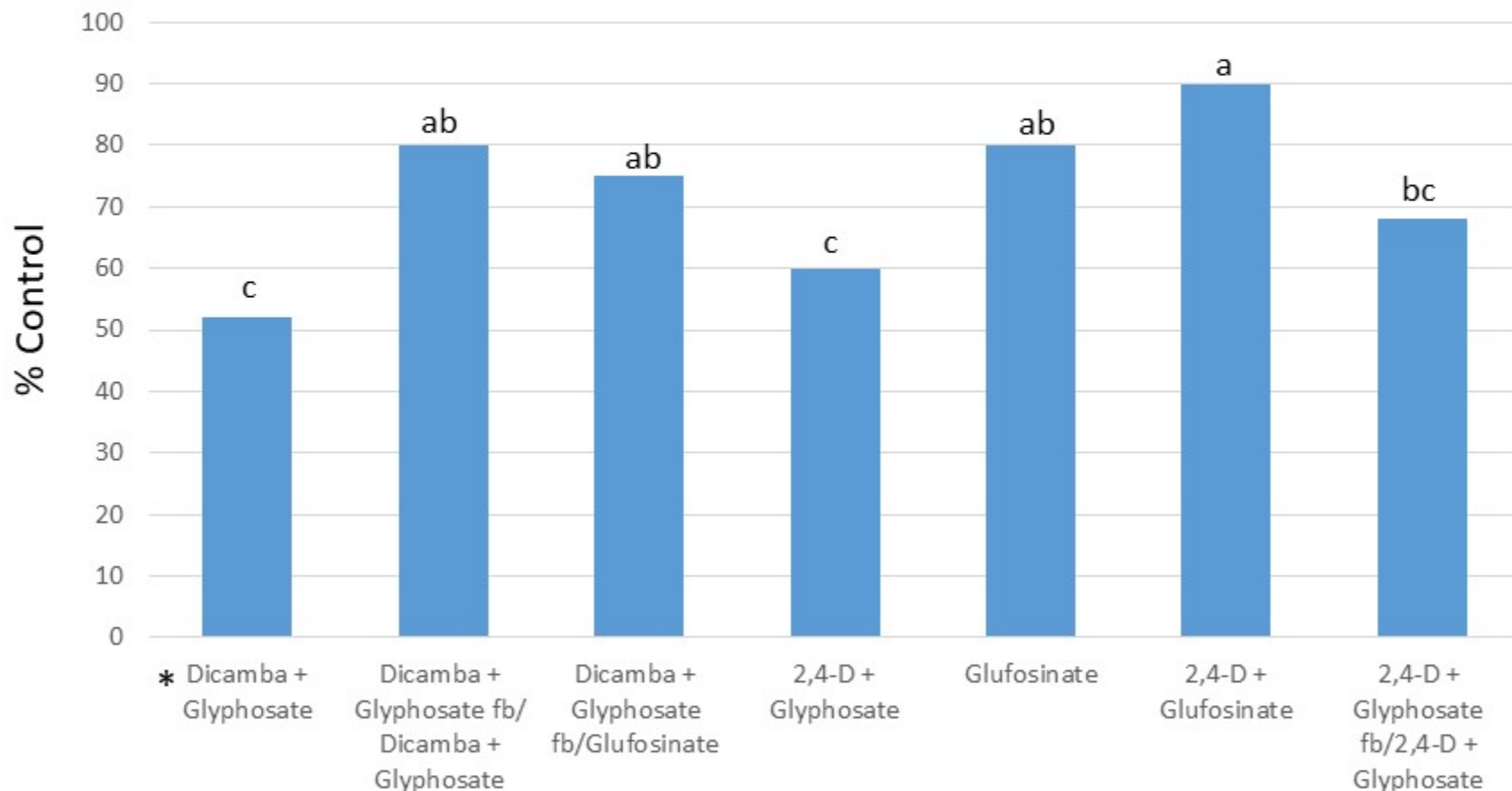




XTENDIMAX 22 fl oz/a
4" Palmer amaranth

Palmer Amaranth Control Madison County

Palmer Control 14 Days After Last Treatment



*Initial Application was applied on Palmer amaranth 2 to 4" tall

Rates: Engenia 12.8 oz/A; Roundup PM 32 oz/A; Enlist One 32 oz/A; Liberty 32 oz/A



Annual Grass Control

- ▶ 2020 MSU reported 7-15% increase in control of signalgrass and ryegrass when clethodim and glyphosate were not allowed to mix with 2,4-D/dicamba (chemical interaction?)
- ▶ 2020 Purdue reported antagonism on volunteer corn with 2,4-D and clethodim requiring separate applications
- ▶ 2020 LSU AgCenter research indicated a 20 percentage point reduction of barnyardgrass control with dicamba and glyphosate
- ▶ 2020 Tennessee reported a 30 percentage point reduction in junglerice control with dicamba and glyphosate (auxins and actively growing plant?)
- ▶ Grass size, environmental conditions, rates, resistance



Teaweed and Yellow Nutsedge Control

- ▶ Enlist Duo and RMP/Xtendimax control teaweed at 1-2" (size issue). Staple LX POST addition
- ▶ Fluometuron alone or plus Staple LX good teaweed control PRE (time for POST application)
- ▶ Fomesafen fair control of yellow nutsedge preplant
- ▶ Dual Magnum fair/good on yellow nutsedge PRE
- ▶ Glyphosate/Envoke good POST
- ▶ Plant size, environmental conditions, rates



Zidua Fertilizer Application

- ▶ 3.2 oz; at least 200 lbs fertilizer
- ▶ Effective grass and pigweed control with good distribution
- ▶ Potential for wet leaf burn
- ▶ Free up time and equipment utilized for PD/POST application making timings more efficient
- ▶ Application on many row spacings.





- ▶ Dr. Donnie Miller
 - ▶ Northeast Research Station
 - ▶ Mobile: 318-614-4044
 - ▶ dmiller@agcenter.lsu.edu



Questions?

