

Recipe for Success: Weed Control in 2010

OK Soy Expo

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OKLAHOMA STATE WEED SCIENCE EXTENSION



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2010 Recipe for Success

- **New herbicides & technologies**
- **State of herbicide resistance in OK**
- **Checklist for weed control in 2010**

Sharpen

- BASF
- AI: saflufenacil (*PPO*) *aka Kixor*
 - Included in Op-Till (Sharpen + Pursuit)
- Use rate: 1 fl oz
- Burndown and PRE only
 - Many broadleaves, incl. maretail

Sharpen

	Rotation restriction		Rotation restriction
Wheat	0 months	Cotton	1.5
Canola	4	Sunflowers	4
Corn	0	Peanuts	4
Grain sorghum	0	Sesame	4
Soybeans	0	Alfalfa	4

Autumn

- Bayer CropScience
- AI: iodosulfuron (*ALS*)
thiencarbazono (*ALS*)
- Use rate: 0.3 oz
- Apply 90 day EPP (fall, early spring)
 - Winter broadleaves

Autumn

	Rotation restriction		Rotation restriction
Wheat	4 months	Cotton	9
Canola	18	Sunflowers	18
Corn	1	Peanuts	18
Grain sorghum	9	Sesame	18
Soybeans	3	Alfalfa	18

Authority First, Sonic

- FMC, Dow
- AI: sulfentrazone (Authority) (*PPO*)
cloransulam (First Rate) (*ALS*)
- Use rate: 3.0 – 6.45 oz
- EPP, PPI, or PRE
 - Pigweeds, morningglories, kochia, other broadleaves

Authority First

	Rotation restriction		Rotation restriction
Wheat	4 months	Cotton	18
Canola	24	Sunflowers	30 + bioassay
Corn	12 (18 if pH > 7)	Peanuts	12
Grain sorghum	12	Sesame	18
Soybeans	0	Alfalfa	12

Authority MTZ

- FMC
- AI: sulfentrazone (Authority) (*PPO*)
metribuzin (Sencor) (*Photosystem II*)
- Use rate: 8 – 18 oz
- EPP (45 d), PPI, or PRE
 - Pigweeds, morningglories, nightshade, lambsquarters, other broadleaves

Authority MTZ

	Rotation restriction		Rotation restriction
Wheat	4 months	Cotton	12
Canola	24 + bioassay	Sunflowers	12
Corn	10 / 4	Peanuts	12
Grain sorghum	18 / 12	Sesame	18
Soybeans	0	Alfalfa	12

Authority Assist

- FMC
- AI: sulfentrazone (Authority) (*PPO*)
imazethapyr (Pursuit) (*ALS*)
- Use rate: 6 – 12 fl oz
- EPP (45 d) to PRE
 - Pigweeds, morningglories, other broadleaves, grasses

Authority Assist

	Rotation restriction		Rotation restriction
Wheat	4 months	Cotton	18
Canola	40 + bioassay	Sunflowers	18
Corn	10	Peanuts	40
Grain sorghum	18	Sesame	40
Soybeans	0	Alfalfa	12

Envive

- DuPont
- AI: flumioxazin (Valor) (*PPO*)
chlorimuron (Classic) (*ALS*)
thifensulfuron (Harmony) (*ALS*)
- Use rate: 3.5 – 5.0 oz
- PRE
 - Pigweeds, morningglories, other broadleaves

Envive

	Rotation restriction		Rotation restriction
Wheat	4 months	Cotton	10 / 30*
Canola	18	Sunflowers	18 / 30*
Corn	10 / 18*	Peanuts	18 / 30*
Grain sorghum	10 / 18*	Sesame	18 / 30*
Soybeans	0	Alfalfa	12 / 18*

* Use longer rotation restriction if soil pH is ≥ 7.0

Prefix

- Syngenta
- AI: fomesafen (Reflex) (*PPO*)
s-metolachlor (Dual) (*Shoot inhib.*)
- Use rate: 2 – 2.33 pt
- PRE or POST
 - Pigweeds, common ragweed, other broadleaves, grasses

For use east of US-75 only

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Prefix

	Rotation restriction		Rotation restriction
Wheat	4.5 months	Cotton	1
Canola	18	Sunflowers	18
Corn	10	Peanuts	18
Grain sorghum	10	Sesame	18
Soybeans	0	Alfalfa	18

Flexstar GT

- Syngenta
- AI: fomesafen (Reflex) (*PPO*)
glyphosate (*glycine*)
- Use rate: 3 pt (up to 4.5 pt)
- Burndown, PRE, or POST (RR)
 - Pigweeds, common ragweed, other broadleaves, grasses

For use east of US-75 only

Flexstar GT

	Rotation restriction		Rotation restriction
Wheat	4 months	Cotton	0
Canola	18	Sunflowers	18
Corn	10	Peanuts	18
Grain sorghum	10	Sesame	18
Soybeans	0	Alfalfa	18

Liberty Link soybean

- Use Ignite herbicide on LL soybean
 - 22 fl oz (x2) or 29 – 36 fl oz (x1)
- Control problematic/glyphosate-R weeds
- Should always include a PRE treatment

PRE herbicides protect yield

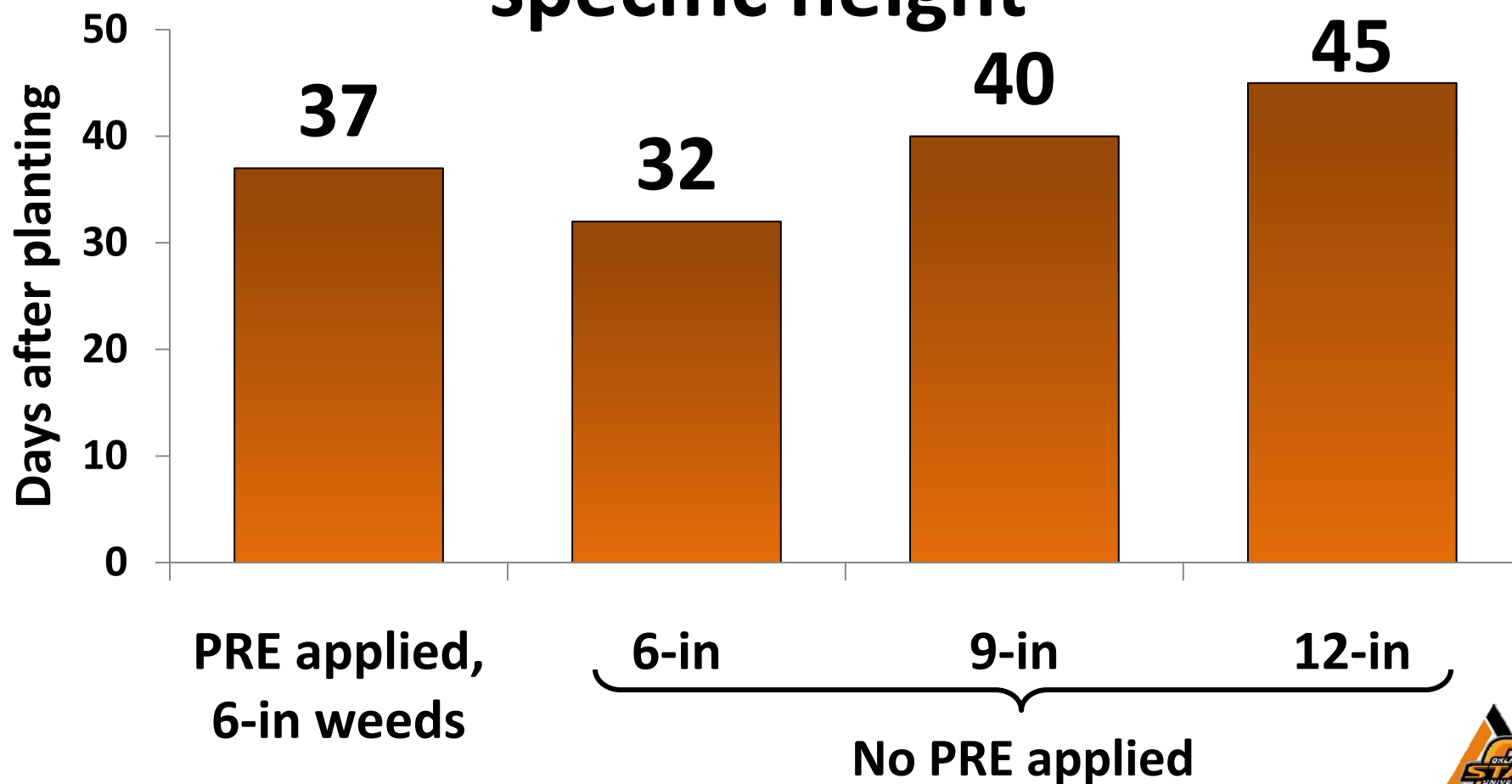
- Reduce early-season competition
- Protect yield if POST applications are delayed
- Improves control of tough weeds
 - Utilize multiple modes of action
 - Smaller weeds at POST application

PRE herbicides protect yield

- Reduce early-season competition
- Protect yield if POST applications are delayed
- Improve control of tough weeds

PRE herbicides delay weed growth

Days required for weeds to reach specific height





State of herbicide resistance in OK

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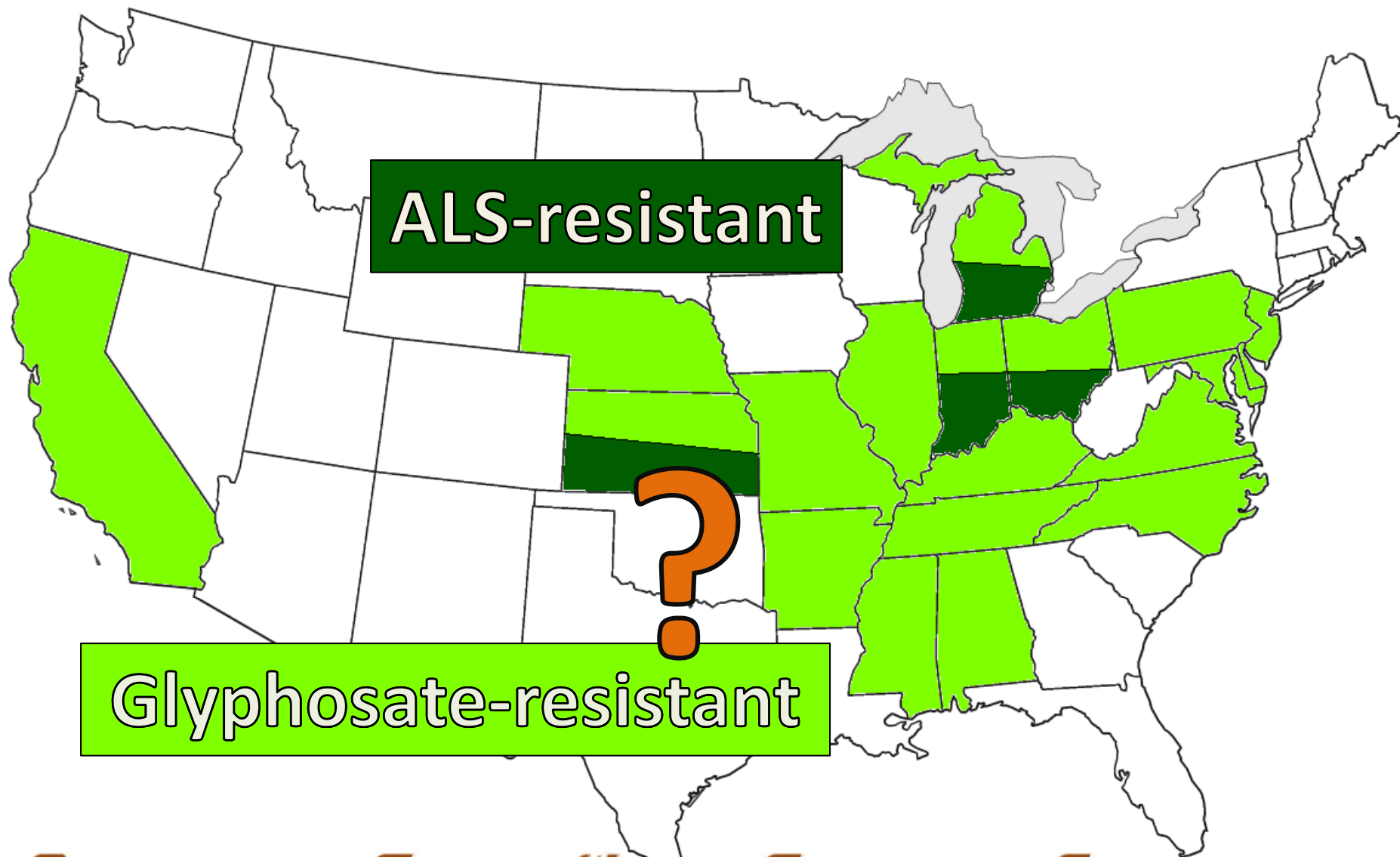


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Herbicide-resistant mareestail

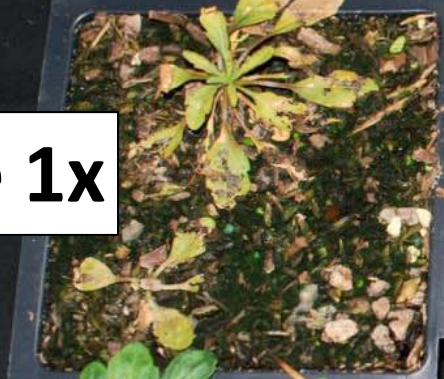


Resistant mareestail in OK?

FirstRate 1x



glyphosate 1x



Untreated



Kingfisher Co.

Washita Co.

Caddo Co.

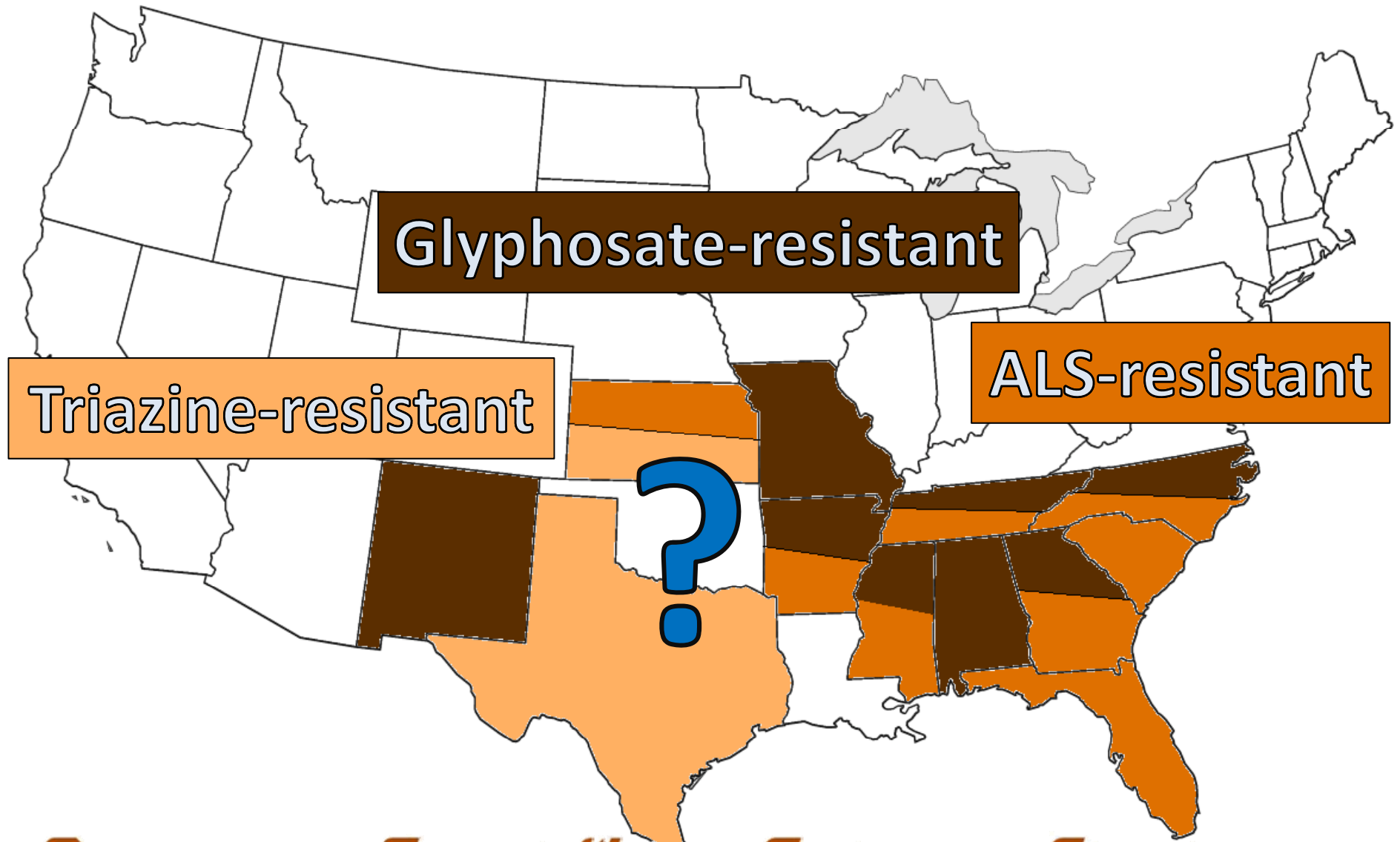


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OKLAHOMA STATE WEED SCIENCE EXTENSION

Herbicide-resistant Palmer amaranth

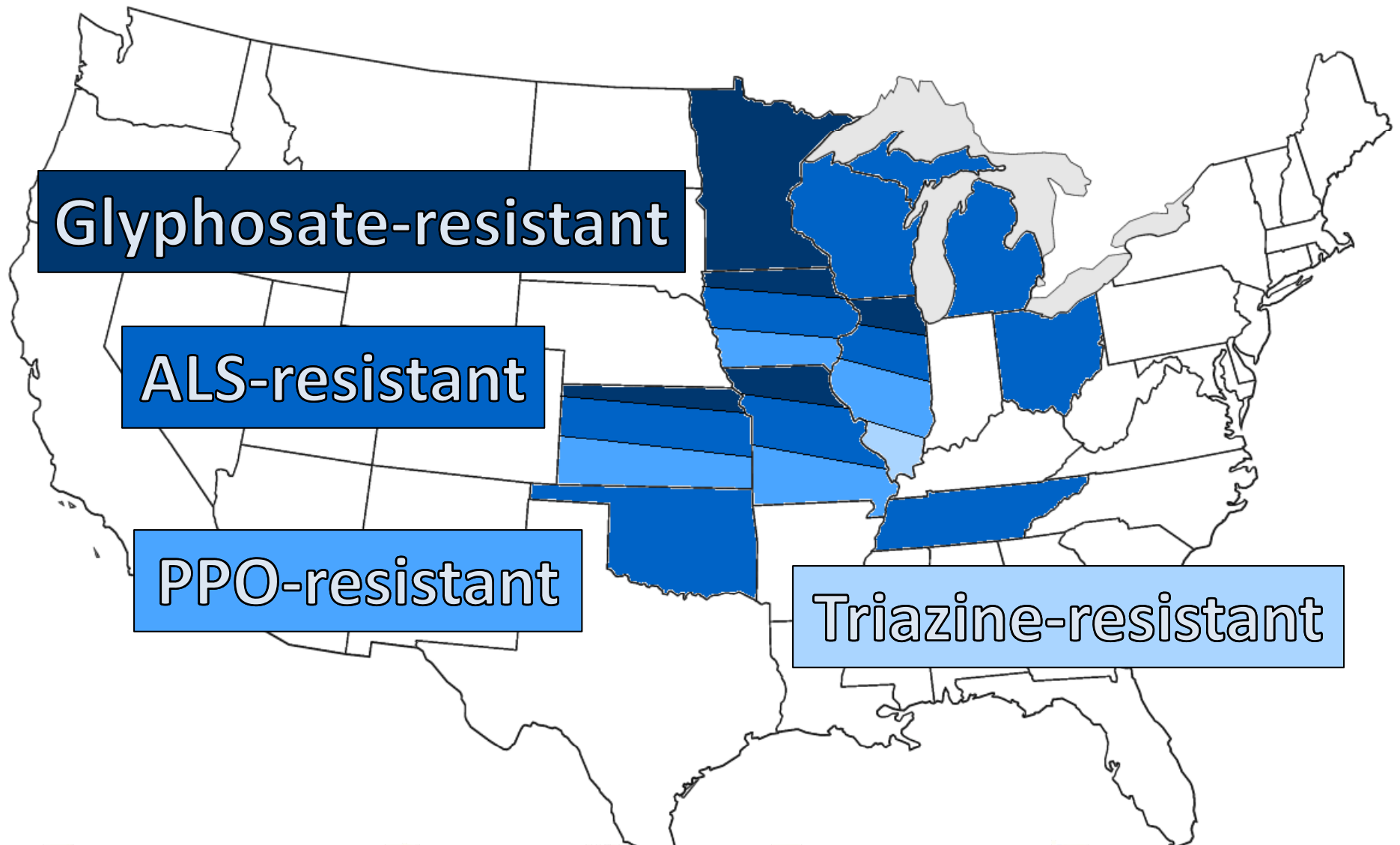


Emanuel Co. (GA), 2009



From Eric Prostko, University of Georgia

Herbicide-resistant waterhemp





ALS-R:	✓
ACCase-R:	??
glyphosate-R:	No

2010 Weed Control

- ✓ Use a PRE herbicide
- ✓ Tank-mix for control of difficult weeds
- ✓ Burndown before planting—*start clean*

Weed control in no-till

- ✓ Scout before and after application
- ✓ Be aware of potential resistance concerns
- ✓ Prevent weed escapes from going to seed

Contact information

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