

Ragweed *Parthenium*

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Ragweed parthenium

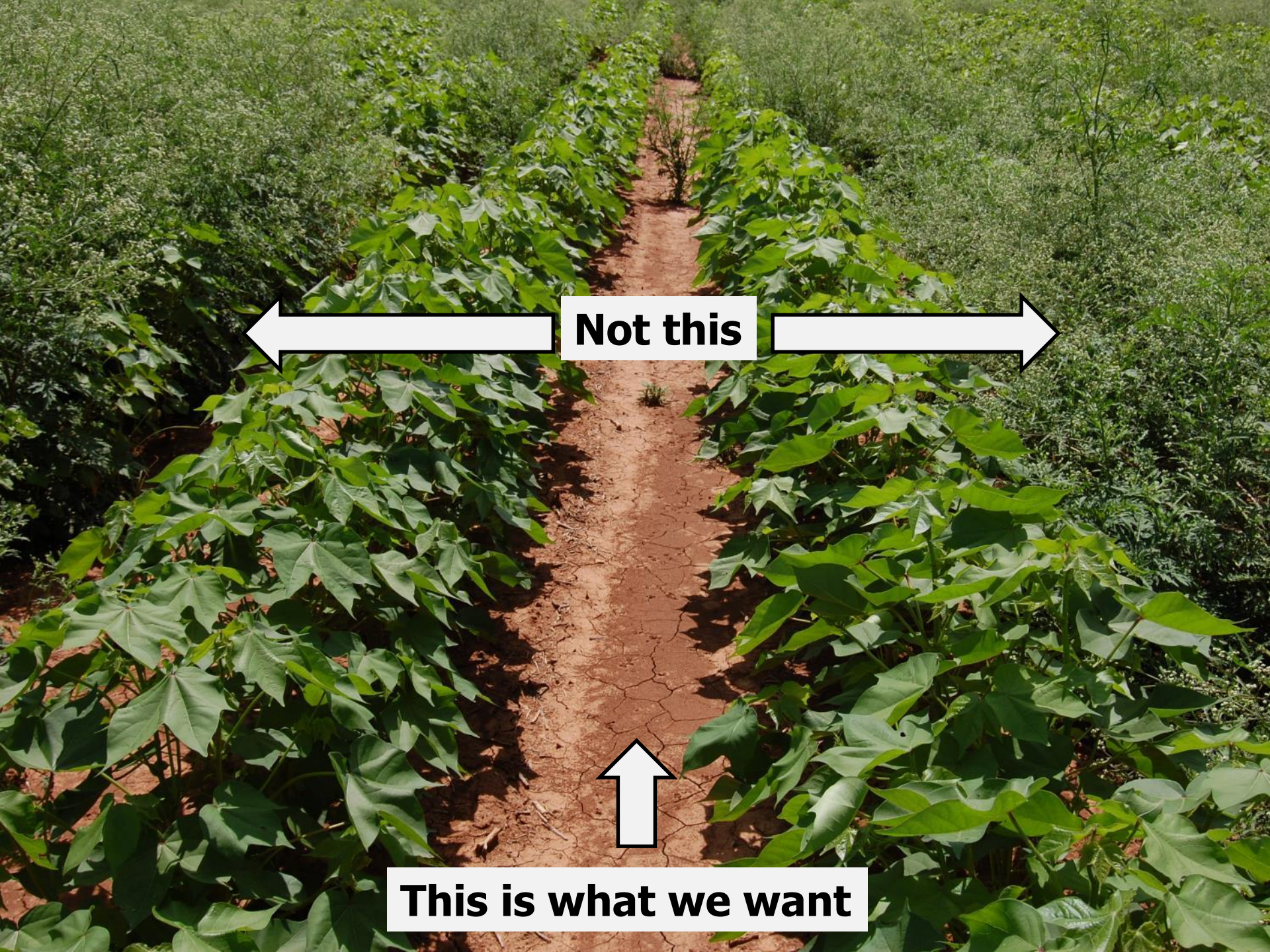
- *Parthenium hysterophorus* L.
 - a.k.a Parthenium weed, Santa Maria feverfew, congress grass, carrot weed, white top, etc.
- Native to Mexico and Central and South America
- Severe issue in India, Africa, Australia
- Drought-tolerant and flowers year-round (Mahadevappa 1997)
- Can grow over wide range of moisture and temperature (Singh et al. 2004)



Ragweed parthenium

- Reproduces only by seed
- Requires high soil moisture for seed germination (Singh et al. 2004)
- Seed germinate over wide range of temperatures and soil pHs (Ahlawat et al. 1979; Tamado et al. 2002)
- Prolific seed producer that can range 280 to 4200 seed/plant (Navie et al. 2004)
- Buried seed remain viable for 2 or more years, but not viable longer than 6 months when on soil surface (Navie et al. 1998; Tamado et al. 2002)
- Emergence prevented when seeds buried 2 inches or deeper
- If buried shallow, duration of seed survival is increased (Tamado et al. 2002)

What does that mean for us?

- Seed germinate over wide range of temperatures
 - Year-round for us
- Requires high soil moisture for germination
 - Typically wet in spring when we see majority of germination
- Emergence prevented when seed buried 2 inches or deeper
 - Deep tillage isn't utilized in Louisiana to a great extent
- Drought-tolerant
 - Another reason it is problematic during the summer



 **Not this** 



This is what we want

Burndown control of R.P.

Herbicide treatment	Rate
Roundup PowerMax + 2,4-D	28 oz/A + 1 lb ae/A
+ Command	1.33 qt/A
+ Cotoran	2 qt/A
+ Valor	2 oz/A
Roundup PowerMax + Sharpen	28 oz/A+ 1 oz/A
+ Command	1.33 qt/A
+ Cotoran	2 qt/A
+ Valor	2 oz/A

Burndown co

- Treatments applied February

Herbicide treatment	7 DAT
Roundup PowerMax + 2,4-D	20
+ Command	50
+ Cotoran	40
+ Valor	70
Roundup PowerMax + Sharpen	95
+ Command	95
+ Cotoran	99
+ Valor	90



95

99



Burndown control of R.P.

Herbicide treatment	Rate	Preplant interval
Sharpen + MSO + AMS	1 oz + 1% v/v + 2.5% v/v	0 days before soybean
Sharpen + MSO + AMS	1.5 oz + 1% v/v + 2.5% v/v	15 days before soybean
XtendiMax	22 oz	1" rain + 28 days before soybean
Roundup PowerMax	32 oz	0 days before soybean
2,4-D Amine	16 oz	15 days before soybean

Applied: April 20, 2018
Air temperature: 47 F
Soil temperature: 55 F

Burndown control of R.P.

Ragweed parthenium size at application



12 days after application



Nontreated



Sharpen @ 1 oz



Sharpen @ 1.5 oz



XtendiMax

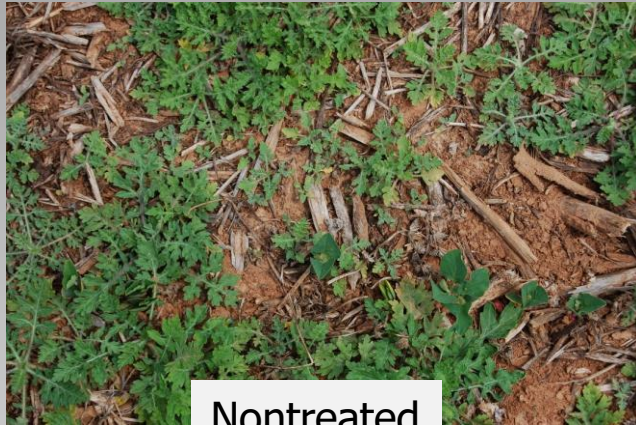


Roundup PowerMax



2,4-D

28 days after application



Nontreated



Sharpen @ 1 oz



Sharpen @ 1.5 oz



XtendiMax



Roundup PowerMax



2,4-D

57 days after application



No burndown
fb
Roundup PowerMax



Burndown
fb
Roundup PowerMax

Ragweed parthenium control with PRE's

- Sharpen @ 1 oz/A
- ~~Authority Elite @ 28 oz/A (Spartan + Dual Magnum)~~
- ~~Authority MTZ @ 14 oz/A (Spartan + metribuzin)~~
- ~~Boundary @ 1.5 pt/A (Dual Magnum + metribuzin)~~
- ~~Valor @ 2 oz/A~~
- Command @ 2.66 pt/A
- ~~Fierce @ 3 oz/A (Valor + Zidua)~~
- Surveil @ 2.8 oz/A (Valor + FirstRate)
- Sonic @ 4 oz/A (Spartan + FirstRate)
- Envive @ 3.5 oz/A (Classic + Valor + Harmony)
- Canopy @ 4 oz/A (Classic + metribuzin)
- ~~Trivence @ 8 oz/A (Classic + Valor + metribuzin)~~
- ~~Intimidator @ 18 oz/A (Reflex + Dual Magnum + metribuzin)~~

0 – 33%
control
21 DAT

Ragweed parthenium control with PRE's

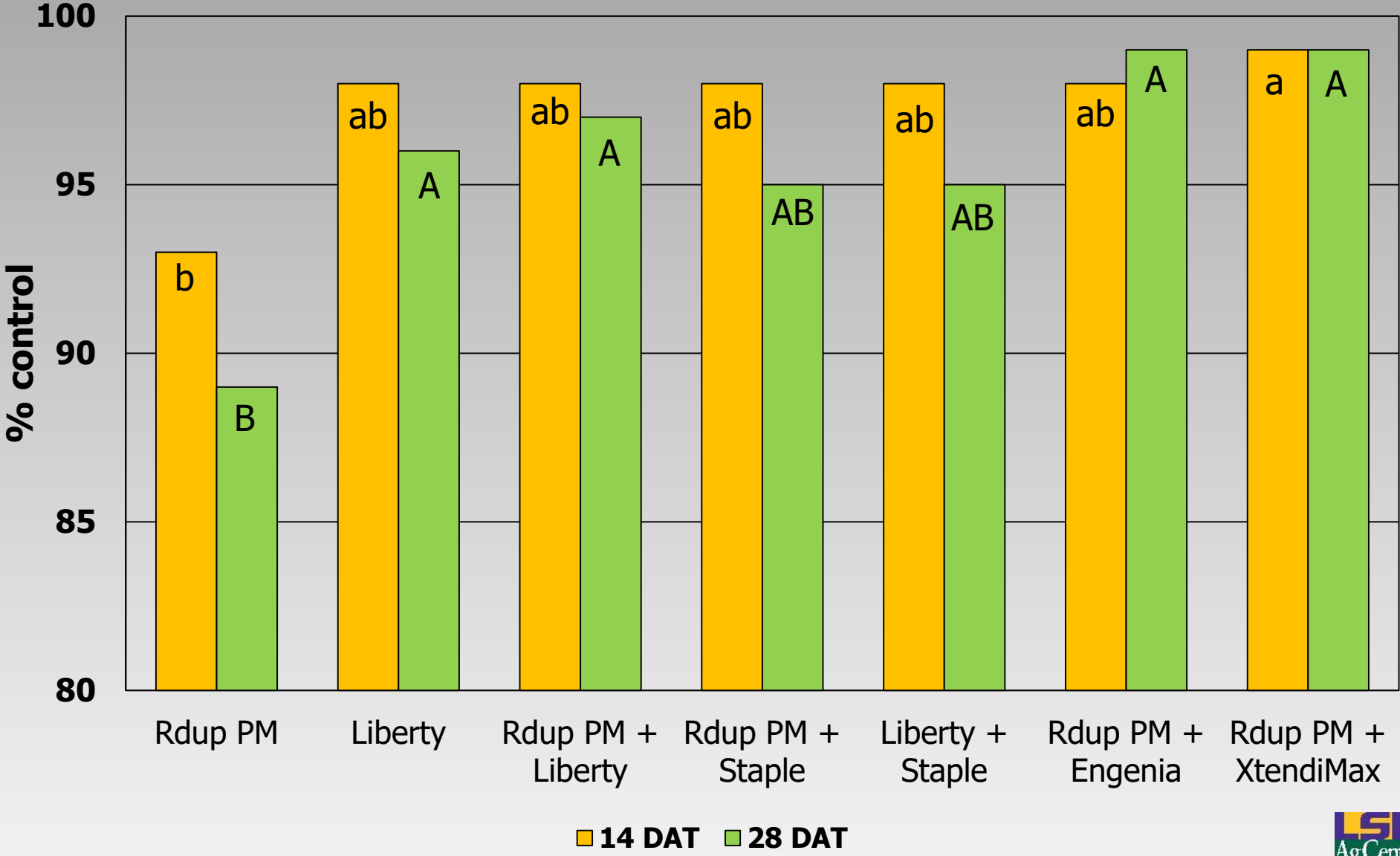
No PRE fb Roundup PowerMax POST

Control of rosette R.P. w/ POST

- POST treatments to 1 leaf cotton
- Ragweed parthenium = 1 to 8 inch tall

Herbicide treatment	Rate
Roundup PowerMax	1 qt/A
Liberty	1 qt/A
Roundup PM + Liberty	1 + 1 qt/A
Roundup PM + Staple	1 qt/A + 2 oz/A
Liberty + Staple	1 qt/A + 2 oz/A
Roundup PM + Engenia	1 qt/A + 12.8 oz/A
Roundup PM + XtendiMax	1 qt/A + 22 oz/A

Control of rosette R.P. w/ POST



Rosette R.P. control 15 DAT



Roundup PowerMax



Roundup PowerMax + Liberty



Liberty



Roundup PM OR Liberty + Staple



Roundup PM + Engenia OR XtendiMax

Rosette R.P. control 27 DAT



Roundup PowerMax



Liberty



Roundup PM + Liberty



Roundup PM + Staple



Liberty + Staple



Roundup PM + Engenia



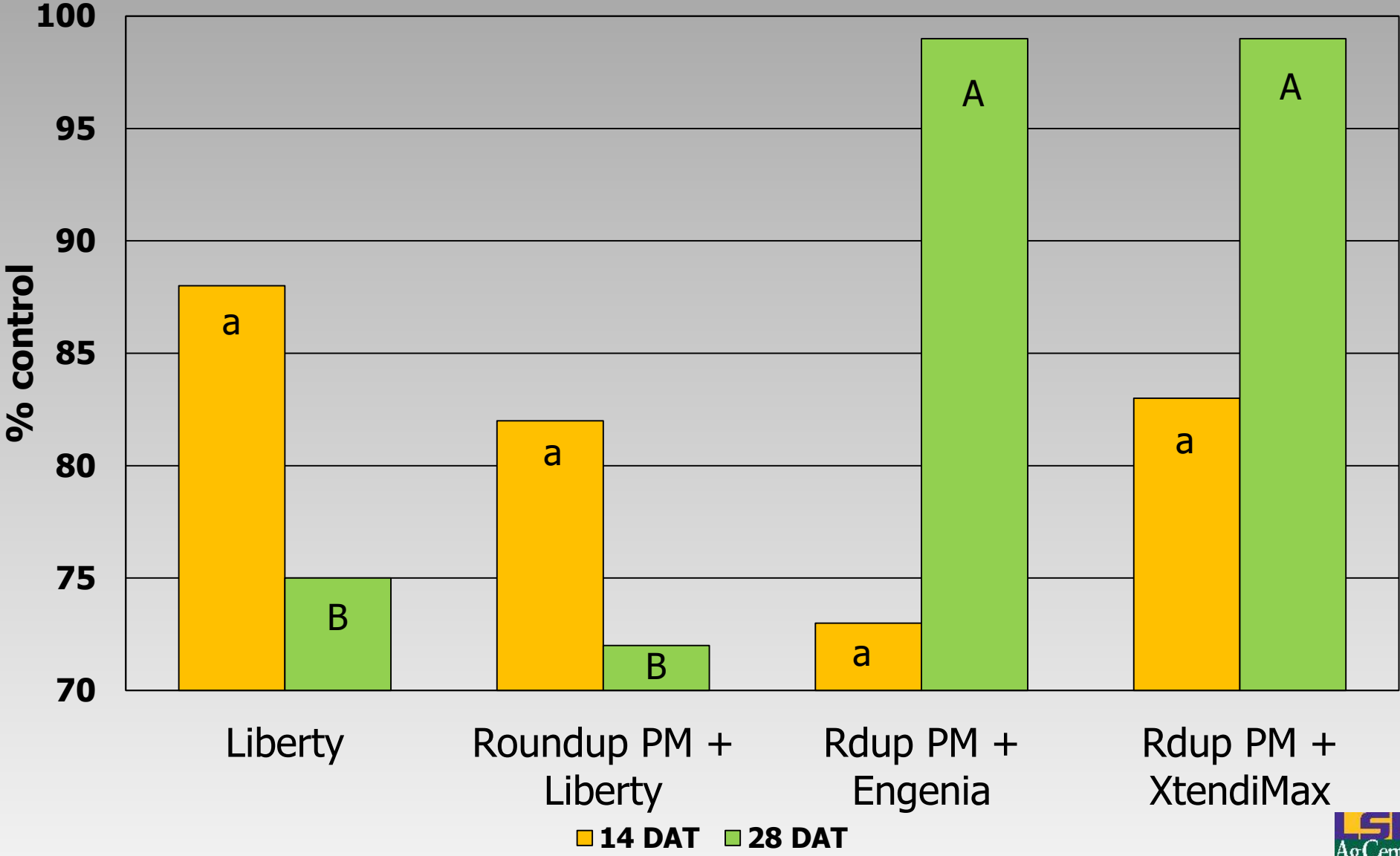
Roundup PM + XtendiMax

Control of bolted R.P. w/ POST

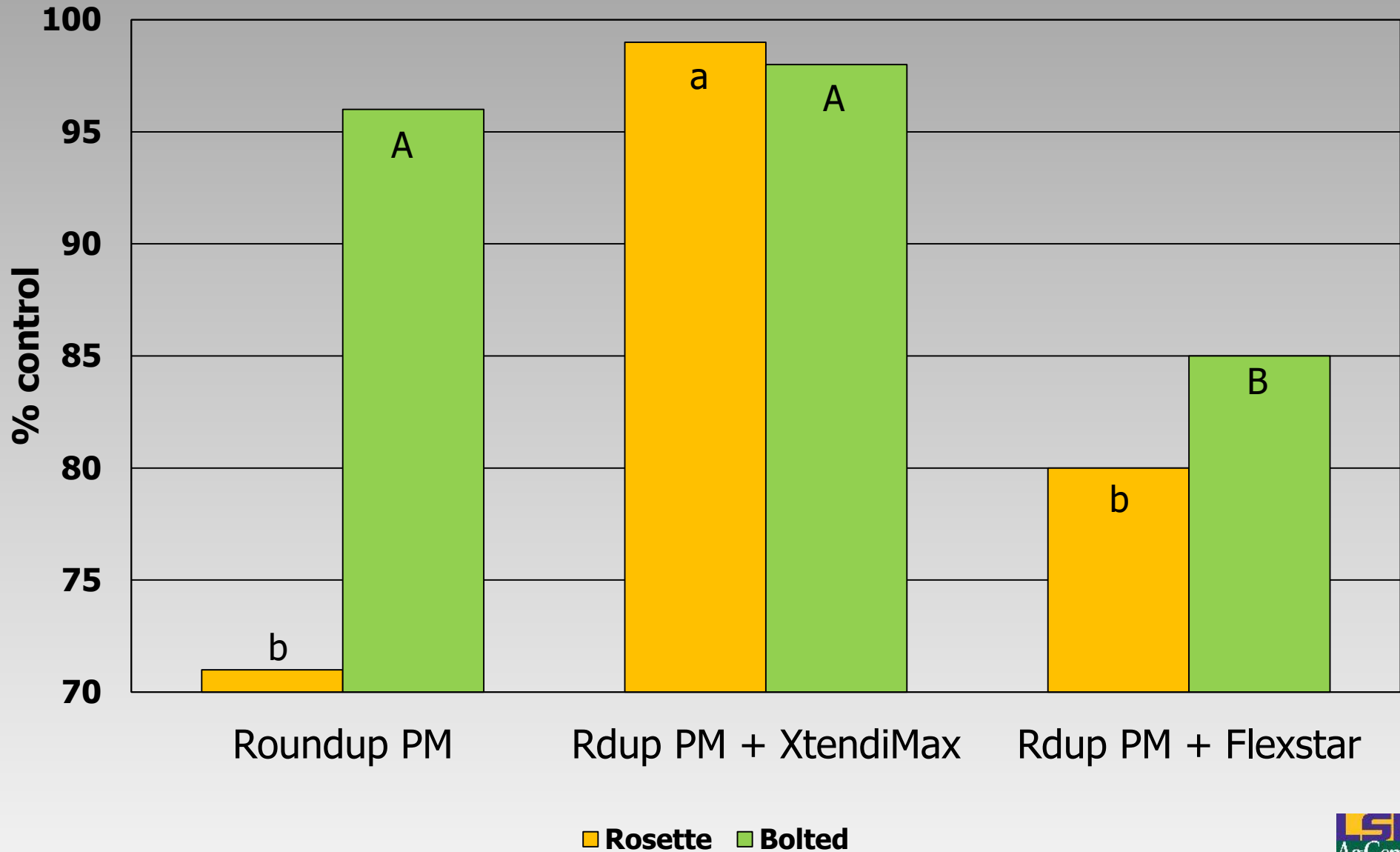
- Ragweed parthenium = 24 to 48 inch tall

Herbicide treatment	Rate
Liberty	1 qt/A
Roundup PM + Liberty	1 + 1 qt/A
Roundup PM + Engenia	1 qt/A + 12.8 oz/A
Roundup PM + XtendiMax	1 qt/A + 22 oz/A

Control of rosette R.P. w/ POST



POST Control – 28 DAT



Wrong time to target R.P.



- Preliminary data indicates
 - Burndown when small.....requires scouting
 - Glyphosate + dicamba
 - Sharpen if immediate activity is needed
 - PRE
 - Products that contain Classic or FirstRate
 - Surveil, Sonic, Envive, Canopy
 - POST
 - Glyphosate, Liberty, glyphosate + Engenia or XtendiMax

This is what we want. So how do we get there?

QUESTIONS?

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