



2020 Soybean Weed Control Update

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Soybean Weed Control (Currently)



- Start clean, use residuals, timely POST
- Narrow rows (<30")
- Systems
 - Conventional
 - RR (glyphosate)
 - LL (glufosinate)
 - GT27 (glufosinate + glyphosate + isoxaflutole)
 - Xtend (dicamba)
 - Enlist (2,4-D choline)



Soybean Weed Control - 2019



Enlist

XtendFlex



Liberty

Xtend

SB-02-19
July 7
53 DAP

SB-01-18

August 3

**XTEND (dicamba)
System (PRE + POST)**

**LIBERTY
System (PRE + POST)**



Old + Cheap + Still Good (i.e. metribuzin)



- Not a PPO (Valor or Reflex)
- Good on pigweed and sicklepod
- Can be applied PPI
 - Dryland fields?
- Issues (Be careful!!)
 - *soil texture, OM, pH*
 - *Varieties*
 - *Rotations*



TriCor 75DF

Metribuzin 75DF



Metribuzin Injury



Soybean Weed Control - 2019



NTC

Tricor 4L @ 8 oz/A (PRE)

Roundup Powermax 5.5SL @ 32 oz/A

+

Reflex 2SL @ 24 oz/A (22 DAP)

Liberty-Link® Soybeans



LIBERTYLINK® 

Liberty®
Herbicide



FORFEIT 280

- Liberty 2.34SL @ 32-43 oz/A or generics
- VE-R1 (beginning bloom)
- 2 applications (5 days apart)
 - (87 oz/A/year total)
- Tank-mixes with POST grass herbicides may reduce grass control
 - Assure (10-21%); Fusilade (8-12%); Poast (25-41%); Select (4-22%)
- Residuals still needed
- **15 GPA, medium-coarse droplet size, small weeds, 9 am - 6 pm**

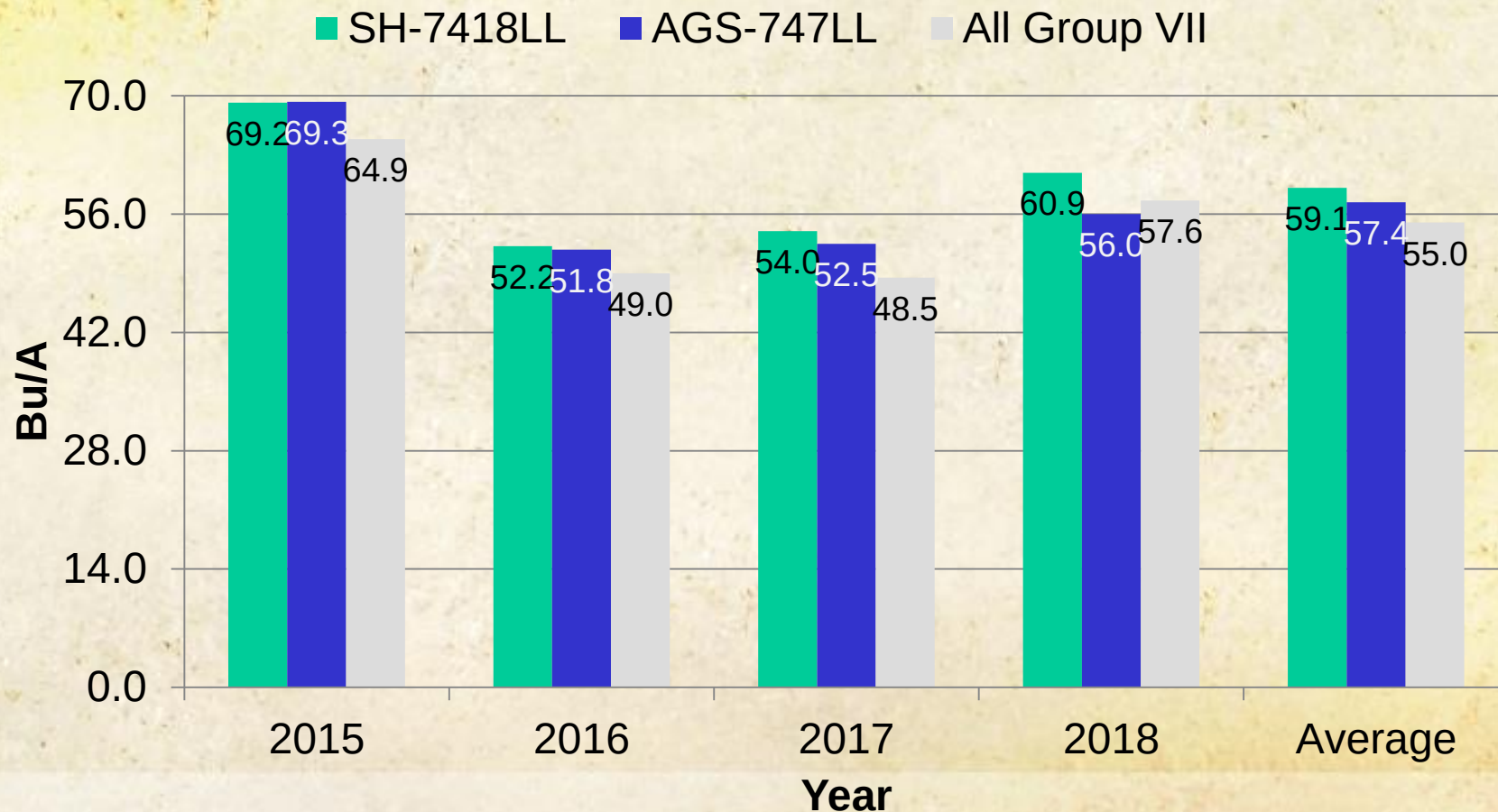
Liberty-Link Soybean Varieties



- Getting better and better!
- G13LL-7 and G13LL-44 developed by UGA Soybean Breeding Team
 - *Group VII's*
 - AGS 747LL (G13LL-7)
 - AGSouth
 - Southern Harvest 7418LL (G13LL-44)
 - Meherrin
- Others



Statewide Average Yield of UGA Developed LL Soybeans*

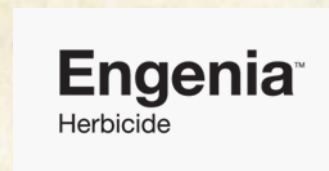


*Source: UGA OVT (6 locations/year, irrigated)

2,4-D/Dicamba Technologies



2,4-D choline



dicamba

Enlist Soybeans



- China approval in Jan 2019
- **Enlist One**
 - 2,4-D choline
- **Enlist Duo**
 - 2,4-D choline + glyphosate
- POST up to R2 (full bloom)
- 2 apps (12 days)
- Can be tank-mixed with glufosinate (Liberty) or others
- Check label/web-sites for restrictions (nozzles, wind speed, buffers, etc.)
- Varieties for GA????

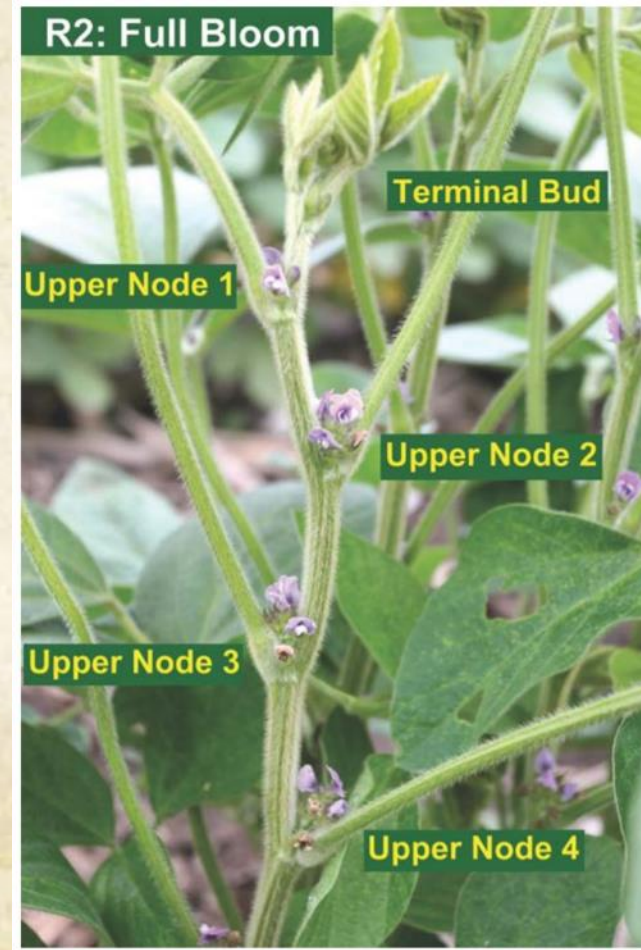


Photo: Dr. Shaun Casteel, Purdue Univ.

Xtend Soybeans



- **Xtendimax 2.9SL, Engenia 5SL, FexaPan 2.9SL**
 - Dicamba
 - POST up to R1 (beginning bloom) or 45 DAP
 - 2 apps (7 days)
 - Add a residual
- **Tavium 3.38SC**
 - dicamba (1.12 ae) + s-metolachlor (2.26 lb)
 - 56.5 oz/A
 - POST up to V4 or 45 DAP
 - tank-mixes
- Check Xtendimax label/web-sites for tank-mixes and restrictions (nozzles, wind speed, buffers, etc.)
- Engenia information

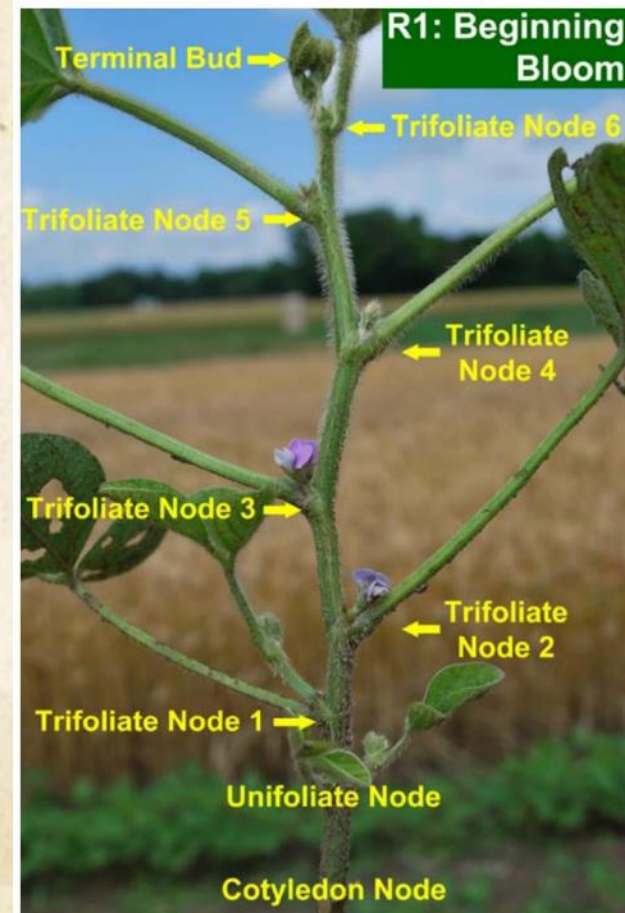


Photo: Dr. Shaun Casteel, Purdue Univ.

Roundup P-Max @ 28.4 oz/A + Tavium (VG)
56.5 oz + Intact @ 0.5% v/v + Class Act
Ridion @ 1% v/v



Future Soybean Weed Control Technologies



- HT3
 - *glufosinate + glyphosate + dicamba*
 - *Xtendflex*
- MGI
 - *mesotrione + glufosinate + isoxaflutole (HPPD)*



Harvest Aids

Soybeans



Herbicide	Rate/A (oz)	Adjuvant	Time of Application		PHI (days)
			Determinate	Indeterminate	
paraquat 2 lb gal 3 lb/gal	16 10.7	NIS @ 0.25% v/v	Fully mature 50% leaf drop Yellow leaves	<30% moisture or 65% of pods mature brown	15
Sharpen 2.85SC	1-2	MSO @ 1% v/v	Fully mature 50% leaf drop Yellow leaves	> 65% mature brown pods and > 70% leaf drop or < 30% seed moisture	3

*Glyphosate and Aim are also labeled (more for weed control than crop dessiccation).

Important Soybean Stages for Harvest Aids



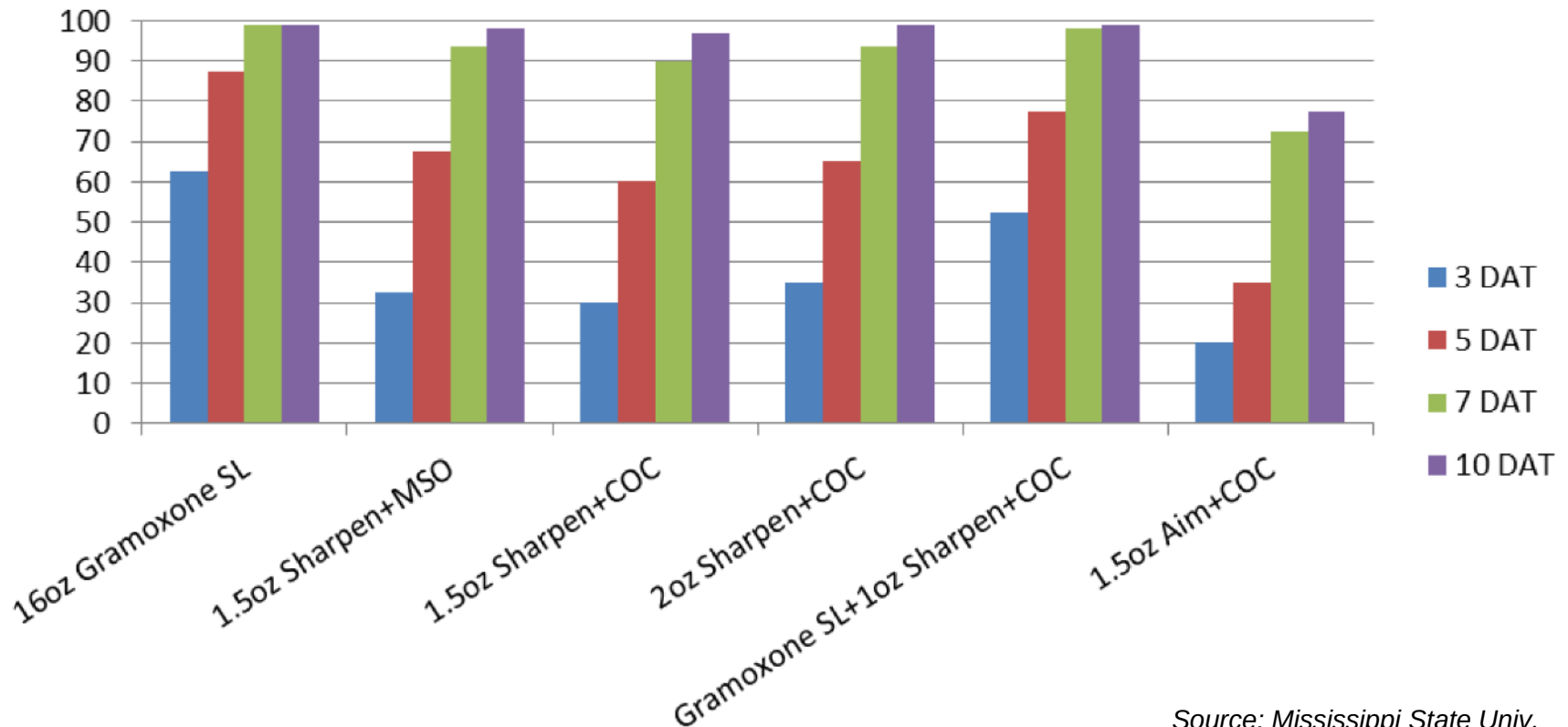
or later

R5-R6 = 11-20 days (15 avg.)
R6-R7 = 9-30 days (18 avg.)

Harvest Aids



Soybean Defoliation/Desiccation with Various Soybean Harvest Aids



Source: Mississippi State Univ.

GRAIN SORGHUM WEED CONTROL UPDATE - 2020

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GEORGIA

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Grain Sorghum Weed Control

- 1) Start clean!
- 2) **Concep** treated seed
- 3) Dual Magnum or Warrant (PRE)
- 4) Atrazine 4L @ 1.5 QT/A (EPOST)
 - 1) Add Huskie if you have ATZ resistance
- 5) Paraquat (Hooded sprayer)
- 6) Mechanical Cultivation

Grain Sorghum Weed Control - 2018



Dual Magnum 7.62EC
24 oz/A (PRE)

NTC

GS-01-18
July 20
86 DAP

Grain Sorghum - 2017



NTC

SG-02-17
June 8
59 DAP



Dual Magnum 7.62EC @ 16 oz/A (PRE)
Atrazine 4L @ 48 oz/A (30 DAP)
COC @ 1% v/v (30 DAP)

A New Product to Consider?

- ***Huskie 2.06EC***
- Bayer CropScience
- Buctril (1.75 lbs/gal) + pyrasulfotole (0.31 lbs/gal)
- MOA = 6 + 27
- Postemergence (13-16 oz/A)
- 3-leaf to 12" tall sorghum
- Broadleaf weeds, good on pigweed
- Tank-mix with atrazine (16 oz/A)



Grain Sorghum - 2017



NTC

SG-02-17
June 8
59 DAP



Dual Magnum 7.62EC @ 16 oz/A (PRE)
Huskie 2.06EC @ 13 oz/A (30 DAP)
Atrazine 4L @ 16 oz/A (30 DAP)
AMS Xtra 3.4SL @ 2.5% v/v (30 DAP)
NIS @ 0.25% v/v (30 DAP)

Huskie Injury on Sorghum



Other Sorghum Options

- Sandea/Permit – nutsedge
- Auxin Herbicides
 - 2,4-D
 - Dicamba
 - Rate/Stage
 - Weed size
 - Injury
 - Off-target movement
 - Newer formulations are better (i.e. less volatile)

Engenia™
Herbicide

XTENDIMAX™
with VaporGrip®

Inzen™ Z Grain Sorghum

- Kansas State Univ.
- DuPont/Corteva
- Resistance to POST applications of ALS herbicides
 - Zest (nicosulfuron)
- Non-GMO
 - *Gene from wild genotype of sorghum*
- Varieties for GA?
 - Not yet
- Stewardship!



Inzen™ Cultivar (left row)
Conventional Cultivar (right row - dead)
Ponder Farm 2012

Inzen Sorghum - 2017



NTC



Cinch 7.64EC @ 16 oz/A (PRE)
Zest 75WG @ 0.67 oz/A (30 DAP)
Atrazine 4L @ 24 oz/A (30 DAP)
COC @ 1% v/v (30 DAP)
AMS Xtra 3.4SL @ 2% v/v (30 DAP)

SG-01-17
June 8
59 DAP

Ratoon Grain Sorghum Demo – 2018

July 27 – 1 DAT



Gramoxone @ 3 pts/A + Dual Magnum @ 16 oz/A
(Applied 2 days after mowing stalks to ~4'-8" tall)

Ratoon Grain Sorghum Demo – 2018

August 14 - 19 DAT



Gramoxone @ 3 pts/A + Dual Magnum @ 16 oz/A

Ratoon Grain Sorghum Demo – 2018

August 22 - 27 DAT



Gramoxone @ 3 pts/A + Dual Magnum @ 16 oz/A

Ratoon Grain Sorghum Demo – 2018

September 4 - 40 DAT



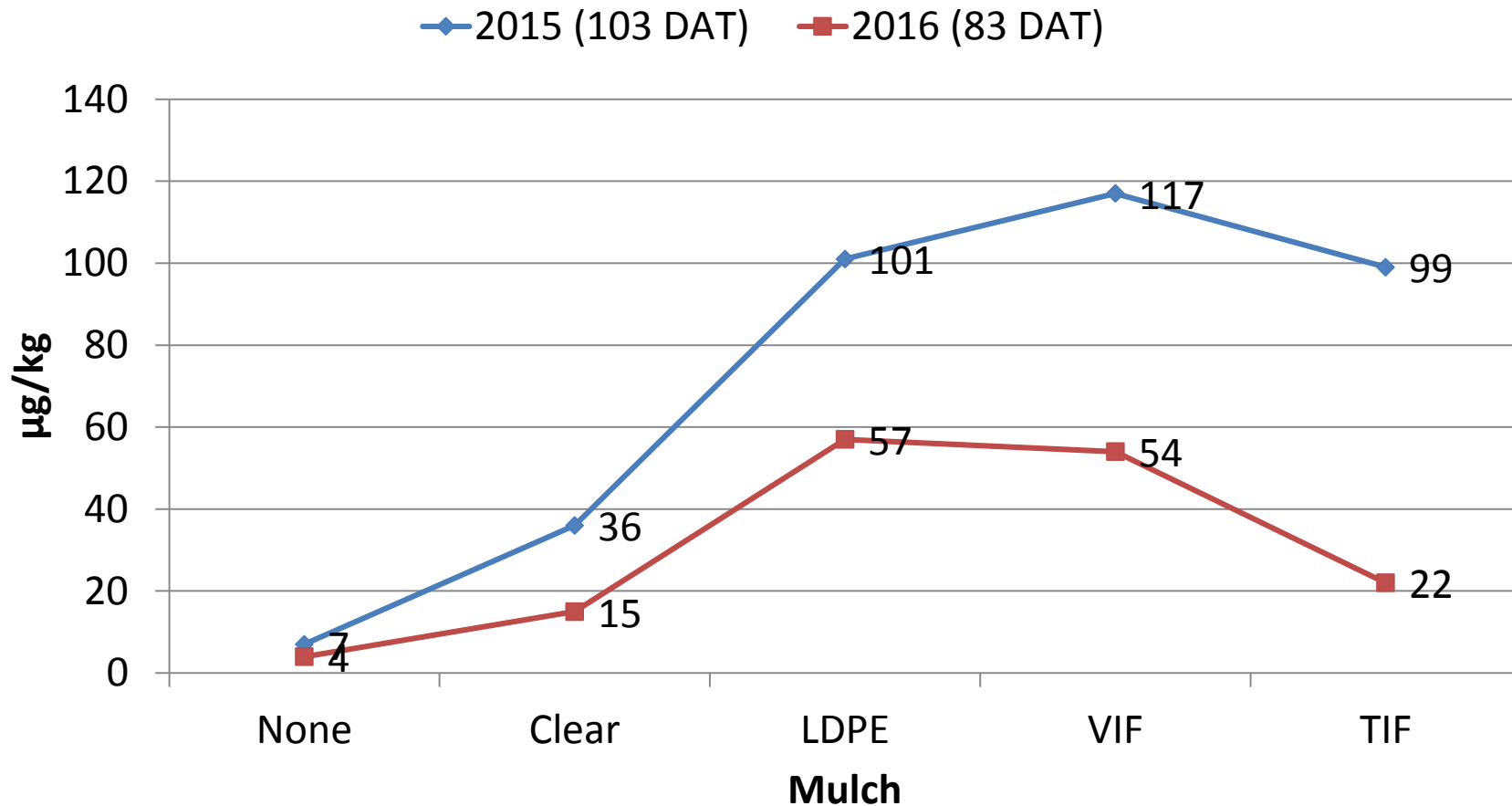
Gramoxone @ 3 pts/A + Dual Magnum @ 16 oz/A

Grain Sorghum After Reflex? (10 month rotation restriction)



****Average ½-life in south GA soils was 80 to 128 days (~100 days)
Potter et al. 2016. J. Agric. Food Chem. 64:5156-5163**

Reflex Concentrations in Soil After PRE Applications Under Assorted Mulches



**Myakka sand (1% OM, 6.8 pH; 95% sand, 4% silt, 1% clay); Reflex concentration at application was 139-176 µg/kg
Source: Reed et al. 2017. Weed Science (FL)*

Reflex 2SL @ 12 oz/A Carryover Injury on Grain Sorghum - 2019 (Applied to Bare-Ground)



NTC



Reflex 2SL @ 12 oz/A
Applied 90 DBP

Reflex 2SL @ 12 oz/A Carryover Injury on Grain Sorghum - 2019 (Applied to Bare-Ground)

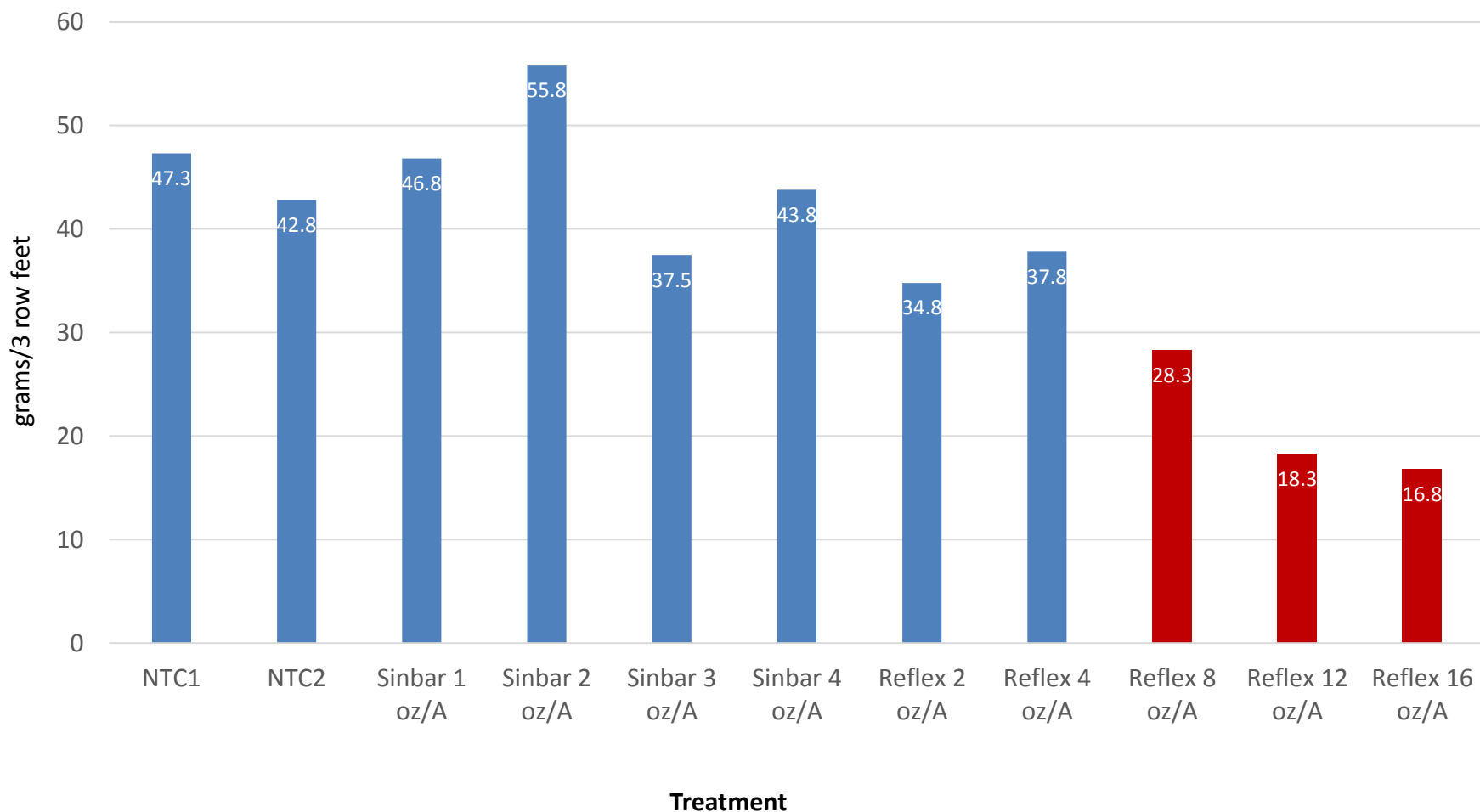


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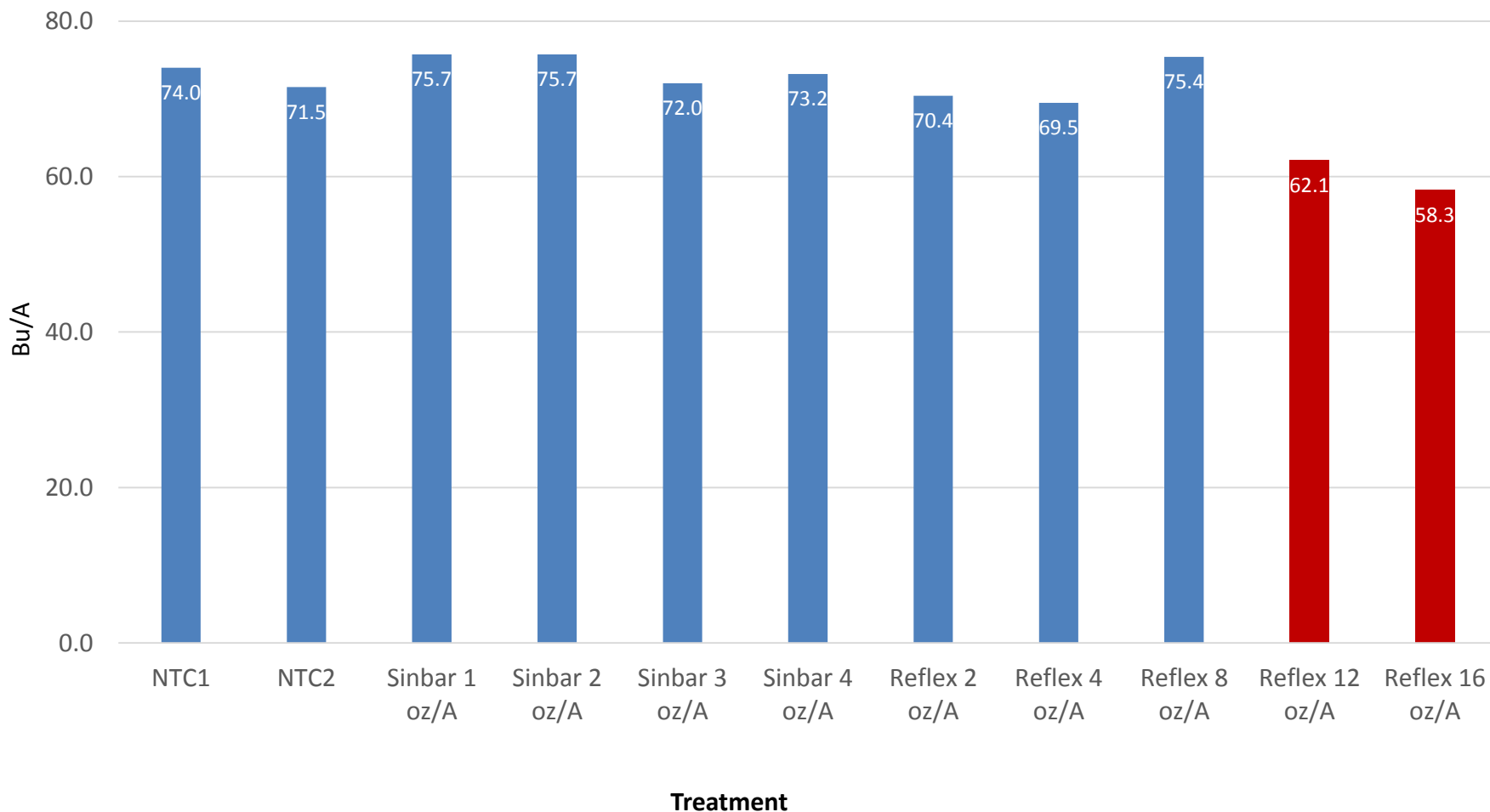


Reflex 2SL @ 12 oz/A
Applied 90 DBP

Grain Sorghum Fresh Weight - 14 DAP - Following Herbicides Applied to Bare-Ground - 90 DBP



Grain Sorghum Yield Following Herbicides Applied to Bare-Ground - 90 DBP



Questions/Comments?

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gaweed.com

