

Purdue Weed Science

Soybean Showcase

Trial ID: 18S-MGS-Soy-21 Location: Meigs Trial Year: 2018
 Protocol ID: 18S-MGS-Soy-21 Investigator: Dr. Bill Johnson
 Project ID: H050SMAD-2018US Study Director: Taylor Campbell
 Sponsor Contact: Syngenta - Chad Threewits

General Trial Information

Study Director: Taylor Campbell
Investigator: Dr. Bill Johnson

Discipline: H herbicide
Trial Status: E established

Trial Location

City: Lafayette **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47909

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Taylor Campbell
Organization: Purdue University
Address: 915 W State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907
Country: USA United States

Investigator: Dr. Bill Johnson
Organization: Purdue University
Address: 915 W State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907
Country: USA United States

Cooperator/Landowner

Cooperator: Jay Young **Role:** Superintendent
Organization: Purdue University
Address 1: 8343 US 231 S
City: Lafayette **Phone No.:** 765-538-3422
State/Prov: IN **Fax No.:** 765-538-3423
Postal Code: 47909
Country: USA United States **E-mail:** jayyoung@purdue.edu

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: 296L4 and AG30X6
Description: Liberty Link vs Xtend

Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Planting Date: 5/7/2018
Planting Method: PLANTD planted
Planting Equipment: PP plot planter
Emergence Date: 5/12/2018

Harvested Width, Unit: 5 FT
Harvested Length, Unit: 22.5 FT
% Standard Moisture: 13.0
Soil Temperature, Unit: 69 F
Soil Moisture: SLIDRY slightly dry

Pest Description

Pest 1 Type: W **Code:** AMATA *Amaranthus tamariscinus*
Common Name: Common waterhemp

Site and Design

Treated Plot Width: 6.67 m
Treated Plot Length: 25 m
Treated Plot Area: 166.75 m² **Treatments:** 8
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: MGS-S3
% Sand: 40.7 **% OM:** 2.3 **Texture:** L loam
% Silt: 38.6 **pH:** 6.5 **Soil Name:** Starks-Fincastle complex
% Clay: 20.7 **CEC:** 14.3 **Fert. Level:** G good

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Application Description

	A	B
Application Date:	5/8/2018	6/4/2018
Appl. Start Time:	9:52 AM	9:35 AM
Appl. Stop Time:	10:05 AM	9:56 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	POEMCR
Application Placement:	BROADC	BROADC
Applied By:	J. Haarmann	M. Zimmer
Air Temperature, Unit:	74 F	68 F
% Relative Humidity:	40	60
Wind Velocity, Unit:	1 MPH	5 MPH
Wind Direction:	NE	SW
Dew Presence (Y/N):	N no	
Soil Temperature, Unit:	62 F	65 F
Soil Moisture:	SLIDRY	SLIWET
% Cloud Cover:	30	30

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	00	13 90
Stage Minimum, Percent:		12 10
Stage Maximum, Percent:		13 90
Average Diameter, Unit:		5 IN
Height, Unit:		9 IN
Height Minimum, Maximum:		8 10

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W	AMATA W
Stage Majority, Percent:	00	17 70
Stage Minimum, Percent:		15 30
Stage Maximum, Percent:		19 10
Diameter, Unit:		3 IN
Height, Unit:		3 IN
Height Minimum, Maximum:		2 4
Density, Unit:		1 FT2

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Application Equipment

	A	B
Appl. Equipment:	CO2 BACKPACK	CO2 BACKPACK
Equipment Type:	BACCAI	BACCAI
Operation Pressure, Unit:	28 PSI	43 PSI
Nozzle Type:	XR	See Notes
Nozzle Size:	8002	11015
Nozzle Spacing, Unit:	20 IN	20 IN
Nozzles/Row:	4	4
Boom Length, Unit:	6.7 FT	6.7 FT
Boom Height, Unit:	18 IN	27 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	945 mL	945 mL
Propellant:	COMCO2	COMCO2

Date By Notes

4/24/2018 T. Campbell Burndown 32 oz of Roundup Power Max, 1 pt of 2,4-D Shredder (ester formulation), and 2.5% v/v N-Pak AMS @ 10 gpa, 30 psi, 5 mph, and 1102 AIXR nozzle on a 4 wheeler with a 20 ft boom with 20 inch spacings

5/7/2018 T. Campbell Gramoxone sprayed morning of planting at 2 pt/a plus 1% v/v of COC @ 10 gpa, 30 psi, 5 mph, and 1102 AIXR nozzle on a 4 wheeler with a 20 ft boom with 20 inch spacings

6/4/2018 T. Campbell TTI were used for xtend and roundup treatments and AIXR were used for liberty link treatments.

6/7/2018 T. Campbell Evening storm brought hail and slight damage occurred at Meigs field site.

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Project ID: H050SMAD-2018US	Study Director: Taylor Campbell	
	Sponsor Contact: Syngenta - Chad Threewits	

Reps: 4 Appl Code: A Plots: 6.67 by 25 meters
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=9360 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Amt Product to Measure	Rep					
									1	2	3	4		
2	BOUNDARY	6.5 LB/GAL	EC	1.8 pt/a	A	14.17 mL/mx	102	301	402	602				
3	BOUNDARY	6.5 LB/GAL	EC	1.8 pt/a	A	14.17 mL/mx	103	302	502	702				
7	BOUNDARY	6.5 LB/GAL	EC	1.8 pt/a	A	14.17 mL/mx	105	205	404	505				
4	BOUNDARY	6.5 LB/GAL	EC	1.8 pt/a	A	14.17 mL/mx	201	401	503	603				
5	BOUNDARY	6.5 LB/GAL	EC	1.8 pt/a	A	14.17 mL/mx	202	303	403	601				
8	BROADAXE XC	7 LB/GAL	EC	25 fl oz/a	A	12.3 mL/mx	204	304	405	605				

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Reps: 4 Appl Code: B Plots: 6.67 by 25 meters
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=9360 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Amt to Measure	Rep 1	Rep 2	Rep 3	Rep 4
2	FLEXSTAR GT 3.5	2.82	LBAE/GAL	L	3.5	pt/a	B	27.56 mL/mx	102	301	402	602
	MSO	100 %		SL	1	% v/v	B	9.449 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				
3	PREFIX	5.29	LB/GAL	EC	2	pt/a	B	15.75 mL/mx	103	302	502	702
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26	fl oz/a	B	12.8 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				
7	PREFIX	5.29	LB/GAL	EC	2	pt/a	B	15.75 mL/mx	105	205	404	505
	LIBERTY 280 SL	2.34	LB/GAL	SL	32	fl oz/a	B	15.75 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				
4	TAVIUM	3.39	LBAE/GAL	L	56.5	fl oz/a	B	27.81 mL/mx	201	401	503	603
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26	fl oz/a	B	12.8 mL/mx				
	CLASS ACT RIDION	100 %		L	1	% v/v	B	9.449 mL/mx				
	INTACT	100 %		L	0.5	% v/v	B	4.724 mL/mx				
5	PREFIX	5.29	LB/GAL	EC	2	pt/a	B	15.75 mL/mx	202	303	403	601
	XTENDIMAX	2.9	LBAE/GAL	SL	22	fl oz/a	B	10.83 mL/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26	fl oz/a	B	12.8 mL/mx				
	CLASS ACT RIDION	100 %		L	1	% v/v	B	9.449 mL/mx				
	INTACT	100 %		L	0.5	% v/v	B	4.724 mL/mx				
8	PREFIX	5.29	LB/GAL	EC	2	pt/a	B	15.75 mL/mx	204	304	405	605
	LIBERTY 280 SL	2.34	LB/GAL	SL	32	fl oz/a	B	15.75 mL/mx				
	N-PAK	3.4	LBA/GAL	L	2.5	% v/v	B	23.62 mL/mx				

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Project ID: H050SMAD-2018US	Study Director: Taylor Campbell	
	Sponsor Contact: Syngenta - Chad Threewits	

Reps: 4 Appl Code: _ Plots: 6.67 by 25 meters
 Spray vol: 15 GAL/AC Mix Size: 945 mL (total for 4 plots; minimum=9360 mL)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Appl Unit	Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	AG30X6 UNTREATED								101	203	501	701
2	RR2 AG30X6								102	301	402	602
3	RR2 AG30X6								103	302	502	702
6	296L4 UNTREATED								104	305	504	604
7	LIBERTY 296L4								105	205	404	505
4	XTEND AG30X6								201	401	503	603
5	XTEND AG30X6								202	303	403	601
8	LIBERTY 296L4								204	304	405	605

Sort Order: Application Code, Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Unit	Form Type	Lot Code
88.594	mL	BOUNDARY	6.5	LB/GAL	EC	
34.453	mL	FLEXSTAR GT 3.5	2.82	LBAE/GAL	L	
11.811	mL	MSO	100	%	SL	
118.112	mL	N-PAK	3.4	LBA/GAL	L	
78.750	mL	PREFIX	5.29	LB/GAL	EC	
47.988	mL	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	
34.761	mL	TAVIUM	3.39	LBAE/GAL	L	
23.622	mL	CLASS ACT RIDION	100	%	L	
11.811	mL	INTACT	100	%	L	
13.535	mL	XTENDIMAX	2.9	LBAE/GAL	SL	
39.375	mL	LIBERTY 280 SL	2.34	LB/GAL	SL	
15.381	mL	BROADAXE XC	7	LB/GAL	EC	

* 'Per area' calculations based on spray volume= 15 GAL/AC, mix size= 945 mL (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 15 GAL/AC, mix size= 945 mL.

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Pest Type Pest Code Pest Name	GLXMA Soybean	W Weed AMATA Common waterhe>	GLXMA Soybean	W Weed AMATA Common waterhe>	GLXMA Soybean
Crop Code	GLXMA		GLXMA		GLXMA
Crop Name	Soybean		Soybean		Soybean
Part Rated	PLOT C	PLOT P	PLOT C	PLOT P	PLOT C
Rating Date	5/22/2018	5/22/2018	5/29/2018	5/29/2018	6/4/2018
Rating Type	PHYGEN	CONTRO	PHYGEN	CONTRO	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell
Days After First/Last Applic.	14 14	14 14	21 21	21 21	27 27
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	27 DA-A
Days After Emergence	10 DE-1	10 DE-1	17 DE-1	17 DE-1	23 DE-1
ARM Action Codes					
Number of Decimals	0	0	0	0	0
Trt Treatment No. Name	Rate Rate Unit	Appl Code			
			1	2	3
			4	5	
1 AG30X6 UNTREATED			0	0	0
2 RR2 AG30X6 BOUNDARY FLEXSTAR GT 3.5 MSO N-PAK	1.8 pt/a A 3.5 pt/a B 1 % v/v B 2.5 % v/v B		0 -	100 -	0 -
3 RR2 AG30X6 BOUNDARY PREFIX ROUNDUP POWERMAX N-PAK	1.8 pt/a A 2 pt/a B 26 fl oz/a B 2.5 % v/v B		0 -	100 -	0 -
4 XTEND AG30X6 BOUNDARY TAVIUM ROUNDUP POWERMAX CLASS ACT RIDION INTACT	1.8 pt/a A 56.5 fl oz/a B 26 fl oz/a B 1 % v/v B 0.5 % v/v B		0 -	100 -	0 -
5 XTEND AG30X6 BOUNDARY PREFIX XTENDIMAX ROUNDUP POWERMAX CLASS ACT RIDION INTACT	1.8 pt/a A 2 pt/a B 22 fl oz/a B 26 fl oz/a B 1 % v/v B 0.5 % v/v B		0 -	100 -	0 -
6 296L4 UNTREATED			0	0	0
7 LIBERTY 296L4 BOUNDARY PREFIX LIBERTY 280 SL N-PAK	1.8 pt/a A 2 pt/a B 32 fl oz/a B 2.5 % v/v B		0 -	100 -	0 -

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Untreated treatment(s) 1, 6 excluded from analysis.
 Could not calculate LSD (% mean diff) for columns 1,2,3,5,8,10,12 because error mean square = 0.

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Project ID: H050SMAD-2018US	Study Director: Taylor Campbell	
Sponsor Contact: Syngenta - Chad Threewits		

Pest Type Pest Code Pest Name		W Weed AMATA Common waterhe>		W Weed AMATA Common waterhe>	
Crop Code	GLXMA		GLXMA		GLXMA
Crop Name	Soybean		Soybean		Soybean
Part Rated	PLOT C	PLOT P	PLOT C	PLOT P	PLOT C
Rating Date	5/22/2018	5/22/2018	5/29/2018	5/29/2018	6/4/2018
Rating Type	PHYGEN	CONTRO	PHYGEN	CONTRO	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell
Days After First/Last Applic.	14 14	14 14	21 21	21 21	27 27
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	27 DA-A
Days After Emergence	10 DE-1	10 DE-1	17 DE-1	17 DE-1	23 DE-1
ARM Action Codes					
Number of Decimals	0	0	0	0	0
Trt Treatment No. Name	Rate Appl Rate Unit Code				
8 LIBERTY 296L4		1	2	3	4
BROADAXE XC	25 fl oz/a A	0 -	100 -	0 -	98 -
PREFIX	2 pt/a B				
LIBERTY 280 SL	32 fl oz/a B				
N-PAK	2.5 % v/v B				
LSD P=.05					1.9
Standard Deviation	0.0	0.0	0.0	1.3	0.0
CV	0.0	0.0	0.0	1.3	0.0
Levene's F	0.00	0.00	0.00	24.00	0.00
Levene's Prob(F)	0.00*	0.00*	0.00*	0.001*	0.00*
Skewness	.	.	.	-2.879*	.
Kurtosis	.	.	.	7.2801*	.
Replicate F	0.000	0.000	0.000	0.600	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	0.6249	1.0000
Treatment F	0.000	0.000	0.000	2.400	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	0.0866	1.0000

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Project ID: H050SMAD-2018US	Study Director: Taylor Campbell	
	Sponsor Contact: Syngenta - Chad Threewits	

Pest Type Pest Code Pest Name	W Weed AMATA Common waterhe>	GLXMA Soybean PLOT P 6/4/2018 CONTRO %	W Weed AMATA Common waterhe>	GLXMA Soybean PLOT C 6/12/2018 PHYGEN %	W Weed AMATA Common waterhe>		
Crop Code		GLXMA		GLXMA			
Crop Name		Soybean		Soybean			
Part Rated	PLOT P	PLOT C	PLOT P	PLOT C	PLOT P		
Rating Date	6/4/2018	6/12/2018	6/12/2018	6/19/2018	6/19/2018		
Rating Type	CONTRO	PHYGEN	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
Assessed By	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell		
Days After First/Last Applic.	27 27	35 8	35 8	42 15	42 15		
Trt-Eval Interval	27 DA-A						
Days After Emergence	23 DE-1	31 DE-1	31 DE-1	38 DE-1	38 DE-1		
ARM Action Codes							
Number of Decimals	0	0	0	0	0		
Trt Treatment No. Name	Rate Rate Unit	Appl Code	6	7	8	9	10
1 AG30X6 UNTREATED			0	0	0	0	0
2 RR2 AG30X6 BOUNDARY FLEXSTAR GT 3.5 MSO N-PAK	1.8 pt/a A 3.5 pt/a B 1 % v/v B 2.5 % v/v B		100 -	43 a	100 -	19 ab	100 -
3 RR2 AG30X6 BOUNDARY PREFIX ROUNDUP POWERMAX N-PAK	1.8 pt/a A 2 pt/a B 26 fl oz/a B 2.5 % v/v B		100 -	35 bc	100 -	4 cd	100 -
4 XTEND AG30X6 BOUNDARY TAVIUM ROUNDUP POWERMAX CLASS ACT RIDION INTACT	1.8 pt/a A 56.5 fl oz/a B 26 fl oz/a B 1 % v/v B 0.5 % v/v B		100 -	2 d	100 -	3 d	100 -
5 XTEND AG30X6 BOUNDARY PREFIX XTENDIMAX ROUNDUP POWERMAX CLASS ACT RIDION INTACT	1.8 pt/a A 2 pt/a B 22 fl oz/a B 26 fl oz/a B 1 % v/v B 0.5 % v/v B		100 -	30 c	100 -	6 bcd	100 -
6 296L4 UNTREATED			0	0	0	0	0
7 LIBERTY 296L4 BOUNDARY PREFIX LIBERTY 280 SL N-PAK	1.8 pt/a A 2 pt/a B 32 fl oz/a B 2.5 % v/v B		100 -	38 ab	100 -	28 a	100 -

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 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
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Pest Type Pest Code Pest Name	W Weed AMATA Common waterhe>	GLXMA Soybean PLOT P 6/4/2018 CONTRO PHYGEN % 1 T. Campbell	W Weed AMATA Common waterhe>	GLXMA Soybean PLOT P 6/12/2018 CONTRO PHYGEN % 1 T. Campbell	W Weed AMATA Common waterhe>
Crop Code		GLXMA		GLXMA	
Crop Name		Soybean		Soybean	
Part Rated	PLOT P	PLOT C	PLOT P	PLOT C	PLOT P
Rating Date	6/4/2018	6/12/2018	6/12/2018	6/19/2018	6/19/2018
Rating Type	CONTRO	PHYGEN	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell
Days After First/Last Applic.	27 27	35 8	35 8	42 15	42 15
Trt-Eval Interval	27 DA-A				
Days After Emergence	23 DE-1	31 DE-1	31 DE-1	38 DE-1	38 DE-1
ARM Action Codes					
Number of Decimals	0	0	0	0	0
Trt Treatment No. Name	Rate Rate Unit	Appl Code			
8 LIBERTY 296L4			6	7	8
BROADAXE XC	25 fl oz/a A		98 -	35 bc	100 -
PREFIX	2 pt/a B				18 abc
LIBERTY 280 SL	32 fl oz/a B				100 -
N-PAK	2.5 % v/v B				
LSD P=.05	1.9	6.9			14.4
Standard Deviation	1.3	4.6		0.0	9.6
CV	1.3	15.15		0.0	74.6
Levene's F	24.00	2.40		0.00	2.387
Levene's Prob(F)	0.001*	0.078		0.00*	0.079
Skewness	-2.879*	-1.2743*			1.4331*
Kurtosis	7.2801*	0.656			0.9338
Replicate F	0.600	0.526		0.000	0.641
Replicate Prob(F)	0.6249	0.6709		1.0000	0.6002
Treatment F	2.400	39.632		0.000	4.282
Treatment Prob(F)	0.0866	0.0001		1.0000	0.0128

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Pest Type	W Weed		W Weed					
Pest Code	AMATA		AMATA					
Pest Name	Common waterhe>		Common waterhe>					
Crop Code	GLXMA		GLXMA		GLXMA	GLXMA	GLXMA	
Crop Name	Soybean		Soybean		Soybean	Soybean	Soybean	
Part Rated	PLOT P	PLOT C	PLOT P	PLOT C	PLOT C	PLOT C	PLOT C	
Rating Date	6/27/2018	6/27/2018	7/2/2018	10/9/2018	10/9/2018	10/9/2018	10/9/2018	
Rating Type	CONTRO	PHYGEN	CONTRO	YIELD	MOICON		YIELD	
Rating Unit	%	%	%	lb/plot	%		BU	
Number of Subsamples	1	1	1	1	1		1	
Assessed By	T. Campbell	T. Campbell	T. Campbell	T. Campbell	T. Campbell		T. Campbell	
Days After First/Last Applic.	50 23	50 23	55 28	154 127	154 127		154 127	
Trt-Eval Interval								
Days After Emergence	46 DE-1	46 DE-1	51 DE-1	150 DE-1	150 DE-1		150 DE-1	
ARM Action Codes							TY1	
Number of Decimals	0	0	0	1	1		1	
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	11	12	13	14	15	16
1 AG30X6 UNTREATED			0	0	0	8.1	15.0	50.9
2 RR2 AG30X6 BOUNDARY FLEXSTAR GT 3.5 MSO N-PAK	1.8 pt/a 3.5 pt/a 1 % v/v 2.5 % v/v	A B B B	93 -	0 -	100 -	7.5 c	14.9 -	47.1 c
3 RR2 AG30X6 BOUNDARY PREFIX ROUNDUP POWERMAX N-PAK	1.8 pt/a 2 pt/a 26 fl oz/a 2.5 % v/v	A B B B	100 -	0 -	100 -	8.8 a	14.6 -	55.9 a
4 XTEND AG30X6 BOUNDARY TAVIUM ROUNDUP POWERMAX CLASS ACT RIDION INTACT	1.8 pt/a 56.5 fl oz/a 26 fl oz/a 1 % v/v 0.5 % v/v	A B B B B	100 -	0 -	98 -	8.9 a	15.0 -	56.1 a
5 XTEND AG30X6 BOUNDARY PREFIX XTENDIMAX ROUNDUP POWERMAX CLASS ACT RIDION INTACT	1.8 pt/a 2 pt/a 22 fl oz/a 26 fl oz/a 1 % v/v 0.5 % v/v	A B B B B B	100 -	0 -	100 -	9.1 a	14.8 -	57.7 a
6 296L4 UNTREATED			0	0	0	5.1	14.8	32.2
7 LIBERTY 296L4 BOUNDARY PREFIX LIBERTY 280 SL N-PAK	1.8 pt/a 2 pt/a 32 fl oz/a 2.5 % v/v	A B B B	100 -	0 -	98 -	7.8 bc	14.8 -	49.5 bc

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Untreated treatment(s) 1, 6 excluded from analysis.
 Could not calculate LSD (% mean diff) for columns 1,2,3,5,8,10,12 because error mean square = 0.

Purdue Weed Science

Soybean Showcase

Trial ID: 18S-MGS-Soy-21	Location: Meigs	Trial Year: 2018
Protocol ID: 18S-MGS-Soy-21	Investigator: Dr. Bill Johnson	
Project ID: H050SMAD-2018US	Study Director: Taylor Campbell	
Sponsor Contact: Syngenta - Chad Threewits		

Pest Type Pest Code Pest Name	W Weed AMATA Common waterhe>	GLXMA Soybean PLOT P 6/27/2018 CONTRO %	GLXMA Soybean PLOT C 6/27/2018 PHYGEN %	W Weed AMATA Common waterhe>	GLXMA Soybean PLOT P 7/2/2018 CONTRO %	GLXMA Soybean PLOT C 10/9/2018 YIELD lb/plot	GLXMA Soybean PLOT C 10/9/2018 MOICON %	GLXMA Soybean PLOT C 10/9/2018 YIELD BU
Crop Code								
Crop Name								
Part Rated								
Rating Date								
Rating Type								
Rating Unit								
Number of Subsamples								
Assessed By								
Days After First/Last Applic.	50 23	50 23	50 23	55 28	154 127	154 127	154 127	154 127
Trt-Eval Interval								
Days After Emergence	46 DE-1	46 DE-1	46 DE-1	51 DE-1	150 DE-1	150 DE-1	150 DE-1	150 DE-1
ARM Action Codes								TY1
Number of Decimals	0	0	0	0	1	1	1	1
Trt Treatment No. Name	Rate Rate Unit	Appl Code						
8 LIBERTY 296L4			11	12	13	14	15	16
BROADAXE XC	25 fl oz/a A		100 -	0 -	100 -	8.6 ab	14.8 -	54.0 ab
PREFIX	2 pt/a B							
LIBERTY 280 SL	32 fl oz/a B							
N-PAK	2.5 % v/v B							
LSD P=.05	9.3	.			2.1	0.80	0.38	5.11
Standard Deviation	6.2	0.0			1.4	0.53	0.25	3.39
CV	6.29	0.0			1.39	6.25	1.68	6.34
Levene's F	0.945	0.00			0.00	0.807	3.771	0.807
Levene's Prob(F)	0.476	0.00*			0.00*	0.56	0.016*	0.56
Skewness	-4.8335*	.			-2.5882*	-1.0706*	-0.4437	-1.0474*
Kurtosis	23.5371*	.			5.8436*	1.3148	0.265	1.2496
Replicate F	0.906	0.000			0.843	4.129	1.946	4.107
Replicate Prob(F)	0.4612	1.0000			0.4914	0.0255	0.1657	0.0259
Treatment F	0.931	0.000			1.709	6.267	1.378	6.156
Treatment Prob(F)	0.4887	1.0000			0.1931	0.0025	0.2874	0.0027

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Purdue Weed Science

Soybean Showcase

Trial ID: 18S-MGS-Soy-21	Location: Meigs	Trial Year: 2018
Protocol ID: 18S-MGS-Soy-21	Investigator: Dr. Bill Johnson	
Project ID: H050SMAD-2018US	Study Director: Taylor Campbell	
	Sponsor Contact: Syngenta - Chad Threewits	

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

AMATA, Amaranthus tamariscinus, Common waterhemp = US

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLOT = plot

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

lb/plot = pounds per plot

BU = bushel

ARM Action Codes

TY1 = $6.453333^{*}[14]*(100-[15])/87$