

# Purdue Weed Science

## Herbicide programs for Control of Giant Ragweed in Xtend Soybean

Trial ID: 19S-TPAC-SOY-14 Location: TPAC Trial Y  
 Protocol ID: 19S-TPAC-SOY-14 Investigator (Creator): Dr. Bill Johnson  
 Project ID: H050DCAD-2019-US Study Director: Dustin Johnson & Marcelo Zimmer  
 Sponsor Contact: C. Threewits - Syngenta

### General Trial Information

**Study Director:** Dustin Johnson & Marcelo Zimmer **Title:** Research Associate  
**Investigator:** Dr. Bill Johnson **Title:** Professor

**Discipline:** H herbicide  
**Trial Status:** E established

**ARM Trial Created On:** Apr-22-2019  
**Initiation Date:** Jun-3-2019

### Trial Location

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

**Latitude of LL Corner °:** 40.29173 N  
**Longitude of LL Corner °:** -86.90602 W

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Role:** STYDIR

**Study Director:** Dustin Johnson & Marcelo Zimmer **Title:** Research Associate  
**Organization:** Purdue University  
**Address 1:** 915 W. State Street  
**Country:** USA United States **E-mail:** john1357@purdue.edu  
**City:** West Lafayette, IN **Postal Code:** 47907

**Role:** INVEST

**Investigator:** Dr. Bill Johnson **Title:** Professor  
**Organization:** Purdue University  
**Address 1:** 915 W. State Street  
**Country:** USA United States **E-mail:** wgj@purdue.edu  
**City:** West Lafayette, IN **Postal Code:** 47907

**Role:** COOPER

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

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## Herbicide programs for Control of Giant Ragweed in Xtend Soybean

Trial ID: 19S-TPAC-SOY-14	Location: TPAC	Trial Y
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson	
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer	
	Sponsor Contact: C. Threewits - Syngenta	

### Crop Description

<b>Crop 1:</b> C	GLXMA Glycine max	Soybean	<b>BBCH Scale:</b> BSOY
<b>Entry Date:</b>	Jun-10-2019	<b>Stage Scale:</b> BBCH	
<b>Variety:</b>	XTEND AG30X8		
<b>Attributes:</b>	DICAMBA/RR		
<b>Seed Shape:</b>	ROUND		
<b>Planting Date:</b>	Jun-3-2019	<b>Planting Rate:</b> 158000	S/A
<b>Depth:</b>	1.25 IN		
<b>Rows per Plot:</b>	7	<b>Planting Method:</b> PLANTD	planted
<b>Row Spacing:</b>	15 IN	<b>Planting Equipment:</b> PP	plot planter
<b>Soil Temperature:</b>	77 F	<b>Soil Moisture:</b> DRY	dry
<b>Emergence Date:</b>	Jun-12-2019	<b>Harvested Width:</b> 10	FT
<b>% Standard Moisture:</b> 13		<b>Harvested Length:</b> 25	FT

### Pest Description

<b>Pest 1 Type:</b> W	<b>Code:</b> AMBTR	Ambrosia trifida	<b>Entry Date:</b> Jul-2-2019
<b>Common Name:</b>	Giant ragweed		<b>Stage Scale:</b> BBCH
<b>Pest 2 Type:</b> W	<b>Code:</b> SETFA	Setaria faberi	<b>Entry Date:</b> Jul-2-2019
<b>Common Name:</b>	Giant foxtail		<b>Stage Scale:</b> BBCH

### Site and Design

<b>Treated Plot Width:</b> 10 FT	<b>Site Type:</b> FIELD	field
<b>Treated Plot Length:</b> 30 FT	<b>Experimental Unit:</b> 1	PLOT plot
<b>Treated Plot Area:</b> 300 FT <sup>2</sup>	<b>Treatments:</b> 12	<b>Tillage Type:</b> CONTIL
<b>Replications:</b> 4		conventional-till
		<b>Study Design:</b> RACOB
		Randomized Compl

### Soil Description

<b>Description Name:</b> TPAC-Field 4A		
<b>% OM:</b> 3.1	<b>Texture:</b> SIL	silt loam
<b>pH:</b> 6.61	<b>Soil Name:</b> Toronto-Millbrook	
<b>CEC:</b> 12.09		

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Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer	
	Sponsor Contact: C. Threewits - Syngenta	

### Application Description

	A	B
Application Date	Jun-4-2019	Jul-2-2019
Appl. Start Time	11:50 AM	11:50 AM
Appl. Stop Time	12:25 PM	12:10 PM
Interval to Prev. Appl.		28 DAYS
Application Method	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS
Application Placement	BROADC	BROADC
Applied By	J. HAARMANN	L. MAIA
Appl. Entry Date	Jun-10-2019	Jul-2-2019
Air Temperature Start, Stop	76 F	88 F
% Relative Humidity Start, Stop	44	60
Wind Velocity+Dir. Start	9 MPH SSW	5 MPH WSW
Soil Temperature	70 F	88 F
Soil Moisture	DRY	VERDRY
% Cloud Cover	5	20

### Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	BSOY
Days after Emergence	-8	20
Stage Scale Used	BBCH	BBCH
Stage Majority, Percent	00	13
Stage Minimum, Percent	00	12
Stage Maximum, Percent	00	13
Diameter Average	0 IN	0 IN
Height Average	0 IN	5 IN
Height Minimum, Maximum	0 00	3 6

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 Project ID: H050DCAD-2019-US

Location: TPAC  
 Investigator (Creator): Dr. Bill Johnson  
 Study Director: Dustin Johnson & Marcelo Zimmer  
 Sponsor Contact: C. Threewits - Syngenta

Trial Y

### Pest Stage At Each Application

	A		B	
<b>Pest 1 Code, Type, Scale</b>	AMBTR W			
<b>Stage Majority, Percent</b>	00		14	
<b>Stage Minimum, Percent</b>	00		11	
<b>Stage Maximum, Percent</b>	00		19	
<b>Diameter Average</b>	00	IN	00	IN
<b>Height Average</b>	00	IN	5	IN
<b>Height Minimum, Maximum</b>	00	00	0	10
<b>Density Average</b>	00	FT2	5	FT2
<b>Density Minimum, Maximum</b>	00	00	0	10
<b>Stage Majority, Percent</b>	00		1413	
<b>Stage Minimum, Percent</b>	00		11	
<b>Stage Maximum, Percent</b>	00		16	
<b>Diameter Average</b>	00	IN	00	IN
<b>Height Average</b>	00	IN	3	IN
<b>Height Minimum, Maximum</b>	00	00	0	6
<b>Density Average</b>	00	FT2	2	FT2
<b>Density Minimum, Maximum</b>	00	00	0	35

### Application Equipment

	A		B	
<b>Appl. Equipment</b>	CO2 BACKPACK		CO2 BACKPACK	
<b>Equipment Type</b>	BACSPR		BACSPR	
<b>Operation Pressure</b>	29	PSI	29	PSI
<b>Nozzle Type</b>	TTI		TTI	
<b>Nozzle Size</b>	110015		110015	
<b>Nozzle Spacing</b>	15 IN		15 IN	
<b>Nozzles/Row</b>	8		8	
<b>Boom Length</b>	10 FT		10 FT	
<b>Boom Height</b>	17 IN		17 IN	
<b>Ground Speed</b>	3 MPH		3 MPH	
<b>Carrier</b>	WATER		WATER	
<b>Application Amount</b>	15 GAL/AC		15 GAL/AC	
<b>Mix Size</b>	1.8 liters		1.8 liters	
<b>Propellant</b>	COMCO2		COMCO2	

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<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>			
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Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta			

<b>Context</b>	<b>Date</b>	<b>By</b>	<b>Notes</b>
STATUS	Apr-22-2019	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Jun-10-2019	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

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Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
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Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				

Reps: 4

Plots: 10 by 30 feet

Appl. Amount: 15 GAL/AC

Mix Size: 1.8 liters (total for 4 plots; minimum=1.564 liters)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Appl Amount	Amount Unit	Mix Size	Mix Unit	Amt Product to Measure
1	UNTREATED CHECK										
2	BOUNDARY	6.5 LB/GAL		EC	1.6 pt/a		15 GAL/AC		1.8 liters		24.0 mL/mx
	CANOPY @ 2.25 OZ/A	75 %		DG			15 GAL/AC		1.8 liters		
	TRICOR 75 DF	75 %		DF	1.93 oz/a		15 GAL/AC		1.8 liters		1.734 g/mx
	CLASSIC	25 %		WG	0.963 oz/a		15 GAL/AC		1.8 liters		0.8654 g/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a		15 GAL/AC		1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a		15 GAL/AC		1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v		15 GAL/AC		1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v		15 GAL/AC		1.8 liters		18.0 mL/mx
3	BOUNDARY	6.5 LB/GAL		EC	1.8 pt/a		15 GAL/AC		1.8 liters		27.0 mL/mx
	XTENDIMAX	2.9 LBAE/GAL		SL	22 fl oz/a		15 GAL/AC		1.8 liters		20.62 mL/mx
	INTACT	100 %		L	0.5 % v/v		15 GAL/AC		1.8 liters		8.999 mL/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a		15 GAL/AC		1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a		15 GAL/AC		1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v		15 GAL/AC		1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v		15 GAL/AC		1.8 liters		18.0 mL/mx
4	BOUNDARY	6.5 LB/GAL		EC	1.8 pt/a		15 GAL/AC		1.8 liters		27.0 mL/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a		15 GAL/AC		1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a		15 GAL/AC		1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v		15 GAL/AC		1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v		15 GAL/AC		1.8 liters		18.0 mL/mx
5	BOUNDARY	6.5 LB/GAL		EC	1.8 pt/a		15 GAL/AC		1.8 liters		27.0 mL/mx
	XTENDIMAX	2.9 LBAE/GAL		SL	22 fl oz/a		15 GAL/AC		1.8 liters		20.62 mL/mx
	INTACT	100 %		L	0.5 % v/v		15 GAL/AC		1.8 liters		8.999 mL/mx
	FLEXSTAR GT 3.5	2.82 LBAE/GAL		L	3.5 pt/a		15 GAL/AC		1.8 liters		52.5 mL/mx
	MSO	100 %		SL	1 % v/v		15 GAL/AC		1.8 liters		18.0 mL/mx
	N-PAK AMS	3.4 LBA/GAL		L	2.5 % v/v		15 GAL/AC		1.8 liters		45.0 mL/mx
6	BOUNDARY	6.5 LB/GAL		EC	1.8 pt/a		15 GAL/AC		1.8 liters		27.0 mL/mx
	FIRSTRATE	84 %		WG	0.5 oz/a		15 GAL/AC		1.8 liters		0.4493 g/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a		15 GAL/AC		1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a		15 GAL/AC		1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v		15 GAL/AC		1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v		15 GAL/AC		1.8 liters		18.0 mL/mx
7	BOUNDARY	6.5 LB/GAL		EC	1.8 pt/a		15 GAL/AC		1.8 liters		27.0 mL/mx
	CANOPY @ 2.25 OZ/A	75 %		DG			15 GAL/AC		1.8 liters		
	TRICOR 75 DF	75 %		DF	1.93 oz/a		15 GAL/AC		1.8 liters		1.734 g/mx
	CLASSIC	25 %		WG	0.963 oz/a		15 GAL/AC		1.8 liters		0.8654 g/mx
	FLEXSTAR GT 3.5	2.82 LBAE/GAL		L	3.5 pt/a		15 GAL/AC		1.8 liters		52.5 mL/mx
	MSO	100 %		SL	1 % v/v		15 GAL/AC		1.8 liters		18.0 mL/mx
	N-PAK AMS	3.4 LBA/GAL		L	2.5 % v/v		15 GAL/AC		1.8 liters		45.0 mL/mx

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Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer			
Sponsor Contact: C. Threewits - Syngenta				

Reps: 4

Plots: 10 by 30 feet

Appl. Amount: 15 GAL/AC

Mix Size: 1.8 liters (total for 4 plots; minimum=1.564 liters)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Appl Amount	Mix Size	Mix Unit	Amt Product to Measure
8	PREFIX	5.29 LB/GAL		EC	2 pt/a	15 GAL/AC	1.8 liters		30.0 mL/mx
	CANOPY @ 2.25 OZ/A	75 %		DG		15 GAL/AC	1.8 liters		
	TRICOR 75 DF	75 %		DF	1.93 oz/a	15 GAL/AC	1.8 liters		1.734 g/mx
	CLASSIC	25 %		WG	0.963 oz/a	15 GAL/AC	1.8 liters		0.8654 g/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a	15 GAL/AC	1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a	15 GAL/AC	1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v	15 GAL/AC	1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v	15 GAL/AC	1.8 liters		18.0 mL/mx
9	PREFIX	5.29 LB/GAL		EC	2 pt/a	15 GAL/AC	1.8 liters		30.0 mL/mx
	XTENDIMAX	2.9 LBAE/GAL		SL	22 fl oz/a	15 GAL/AC	1.8 liters		20.62 mL/mx
	INTACT	100 %		L	0.5 % v/v	15 GAL/AC	1.8 liters		8.999 mL/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a	15 GAL/AC	1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a	15 GAL/AC	1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v	15 GAL/AC	1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v	15 GAL/AC	1.8 liters		18.0 mL/mx
10	SONIC	70 %		WG	5 oz/a	15 GAL/AC	1.8 liters		4.493 g/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a	15 GAL/AC	1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a	15 GAL/AC	1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v	15 GAL/AC	1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v	15 GAL/AC	1.8 liters		18.0 mL/mx
11	ZIDUA PRO	4.09 LB/GAL		SC	6 fl oz/a	15 GAL/AC	1.8 liters		5.625 mL/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a	15 GAL/AC	1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a	15 GAL/AC	1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v	15 GAL/AC	1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v	15 GAL/AC	1.8 liters		18.0 mL/mx
12	VALOR SX	51 %		WG	1.93 oz/a	15 GAL/AC	1.8 liters		1.734 g/mx
	ZIDUA SC	4.17 LB/GAL		SC	2.4 fl oz/a	15 GAL/AC	1.8 liters		2.25 mL/mx
	CLASSIC	25 %		WG	1.07 oz/a	15 GAL/AC	1.8 liters		0.9616 g/mx
	TAVIUM	3.39 LB/GAL		CS	56.5 fl oz/a	15 GAL/AC	1.8 liters		52.97 mL/mx
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	26 fl oz/a	15 GAL/AC	1.8 liters		24.37 mL/mx
	INTACT	100 %		L	0.5 % v/v	15 GAL/AC	1.8 liters		8.999 mL/mx
	CLASS ACT RIDION	100 %		L	1 % v/v	15 GAL/AC	1.8 liters		18.0 mL/mx

Sort Order: 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
198.750	mL	BOUNDARY	6.5	LB/GAL	EC	

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Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer			
Sponsor Contact: C. Threewits - Syngenta				

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
6.504	g	TRICOR 75 DF	75	%	DF	
4.447	g	CLASSIC	25	%	WG	
595.898	mL	TAVIUM	3.39	LB/GAL	CS	
274.219	mL	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	
134.985	mL	INTACT	100	%	L	
202.478	mL	CLASS ACT RIDION	100	%	L	
77.344	mL	XTENDIMAX	2.9	LBAE/GAL	SL	
131.250	mL	FLEXSTAR GT 3.5	2.82	LBAE/GAL	L	
44.995	mL	MSO	100	%	SL	
112.488	mL	N-PAK AMS	3.4	LBA/GAL	L	
0.562	g	FIRSTRATE	84	%	WG	
75.000	mL	PREFIX	5.29	LB/GAL	EC	
5.617	g	SONIC	70	%	WG	
7.031	mL	ZIDUA PRO	4.09	LB/GAL	SC	
2.168	g	VALOR SX	51	%	WG	
2.812	mL	ZIDUA SC	4.17	LB/GAL	SC	

\* 'Per area' calculations based on application amount= 15 GAL/AC, mix size= 1.8 L (mix size basis).

\* Product amount calculations increased 25 % for overage adjustment.

\* 'Per volume' calculations use spray volume= 15 GAL/AC, mix size= 1.8 L.

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Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	PHYGEN	CONTRO	CONTRO	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019	
Rating Timing	A1	A1	A1	
Days After First/Last Applic.	14 14	14 14	14 14	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
1 UNTREATED CHECK			0	0
2 BOUNDARY	1.6 pt/a	A	84 ab	100 a
CANOPY @ 2.25 OZ/A		A		3 d
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

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Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019		
Rating Timing	A1	A1	A1		
Days After First/Last Applic.	14 14	14 14	14 14		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1		
Days After Emergence	6 DE-1	6 DE-1	6 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
3 BOUNDARY	1.8 pt/a	A	96 a	100 a	3 d
XTENDIMAX	22 fl oz/a	A			
INTACT	0.5 % v/v	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			
4 BOUNDARY	1.8 pt/a	A	53 c	100 a	2 d
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019		
Rating Timing	A1	A1	A1		
Days After First/Last Applic.	14 14	14 14	14 14		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1		
Days After Emergence	6 DE-1	6 DE-1	6 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
5 BOUNDARY	1.8 pt/a	A	96 a	100 a	3 d
XTENDIMAX	22 fl oz/a	A			
INTACT	0.5 % v/v	A			
FLEXSTAR GT 3.5	3.5 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS	2.5 % v/v	B			
6 BOUNDARY	1.8 pt/a	A	85 ab	100 a	1 d
FIRSTRATE	0.5 oz/a	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019		
Rating Timing	A1	A1	A1		
Days After First/Last Applic.	14 14	14 14	14 14		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1		
Days After Emergence	6 DE-1	6 DE-1	6 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
7 BOUNDARY	1.8 pt/a	A	78 b	100 a	1 d
CANOPY @ 2.25 OZ/A		A			
TRICOR 75 DF	1.93 oz/a	A			
CLASSIC	0.963 oz/a	A			
FLEXSTAR GT 3.5	3.5 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS	2.5 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	PHYGEN	CONTRO	CONTRO	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019	
Rating Timing	A1	A1	A1	
Days After First/Last Applic.	14 14	14 14	14 14	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
8 PREFIX	2 pt/a	A	91 ab	100 a
CANOPY @ 2.25 OZ/A		A		5 cd
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019		
Rating Timing	A1	A1	A1		
Days After First/Last Applic.	14 14	14 14	14 14		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1		
Days After Emergence	6 DE-1	6 DE-1	6 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
9 PREFIX	2 pt/a A		98 a	100 a	5 cd
XTENDIMAX	22 fl oz/a A				
INTACT	0.5 % v/v A				
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				
10 SONIC	5 oz/a A		81 ab	100 a	9 bc
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	PHYGEN	CONTRO	CONTRO	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019	
Rating Timing	A1	A1	A1	
Days After First/Last Applic.	14 14	14 14	14 14	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
11 ZIDUA PRO	6 fl oz/a A		87 ab	100 a
TAVIUM	56.5 fl oz/a B			13 b
ROUNDUP POWERMAX	26 fl oz/a B			
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	PHYGEN	CONTRO	CONTRO	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019	
Rating Timing	A1	A1	A1	
Days After First/Last Applic.	14 14	14 14	14 14	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
12 VALOR SX	1.93 oz/a	A	86 ab	100 a
ZIDUA SC	2.4 fl oz/a	A		26 a
CLASSIC	1.07 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		
LSD P=.05			17.7	0.2
Standard Deviation			12.3	0.2
CV			14.46	0.15
Grand Mean			84.9	100.0
Levene's F			3.208	0.509
Levene's Prob(F)			0.006*	0.872
Rank X2			.	.
P(Rank X2)			.	.

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jun-18-2019	Jun-18-2019	Jun-18-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	PHYGEN	CONTRO	CONTRO	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jun-20-2019	Jun-20-2019	Jun-20-2019	
Rating Timing	A1	A1	A1	
Days After First/Last Applic.	14 14	14 14	14 14	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
Skewness			-3.6362*	-6.6333*
Kurtosis			17.4387*	44.0*
Replicate F			1.211	1.000
Replicate Prob(F)			0.3228	0.4064
Treatment F			4.162	1.000
Treatment Prob(F)			0.0011	0.4654
				3
				1.5749*
				2.0814*
				4.921
				0.0067
				16.970
				0.0001

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019	
Rating Timing	A2	A2	A2	
Days After First/Last Applic.	28 28	28 28	28 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	4	5
1 UNTREATED CHECK			0	0
2 BOUNDARY	1.6 pt/a	A	68 bc	99 a
CANOPY @ 2.25 OZ/A		A		0 b
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A2	A2	A2		
Days After First/Last Applic.	28 28	28 28	28 28		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	20 DE-1	20 DE-1	20 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	4	5	6
3 BOUNDARY	1.8 pt/a	A	92 a	100 a	0 b
XTENDIMAX	22 fl oz/a	A			
INTACT	0.5 % v/v	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			
4 BOUNDARY	1.8 pt/a	A	30 d	100 a	0 b
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A2	A2	A2		
Days After First/Last Applic.	28 28	28 28	28 28		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	20 DE-1	20 DE-1	20 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	4	5	6
5 BOUNDARY	1.8 pt/a	A	94 a	100 a	0 b
XTENDIMAX	22 fl oz/a	A			
INTACT	0.5 % v/v	A			
FLEXSTAR GT 3.5	3.5 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS	2.5 % v/v	B			
6 BOUNDARY	1.8 pt/a	A	79 abc	100 a	0 b
FIRSTRATE	0.5 oz/a	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A2	A2	A2		
Days After First/Last Applic.	28 28	28 28	28 28		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	20 DE-1	20 DE-1	20 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	4	5	6
7 BOUNDARY	1.8 pt/a	A	69 bc	100 a	0 b
CANOPY @ 2.25 OZ/A		A			
TRICOR 75 DF	1.93 oz/a	A			
CLASSIC	0.963 oz/a	A			
FLEXSTAR GT 3.5	3.5 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS	2.5 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A2	A2	A2		
Days After First/Last Applic.	28 28	28 28	28 28		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	20 DE-1	20 DE-1	20 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	4	5	6
8 PREFIX	2 pt/a	A	87 ab	99 a	0 b
CANOPY @ 2.25 OZ/A		A			
TRICOR 75 DF	1.93 oz/a	A			
CLASSIC	0.963 oz/a	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A2	A2	A2		
Days After First/Last Applic.	28 28	28 28	28 28		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	20 DE-1	20 DE-1	20 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	4	5	6
9 PREFIX	2 pt/a A		97 a	100 a	0 b
XTENDIMAX	22 fl oz/a A				
INTACT	0.5 % v/v A				
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				
10 SONIC	5 oz/a A		60 c	100 a	0 b
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019	
Rating Timing	A2	A2	A2	
Days After First/Last Applic.	28 28	28 28	28 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	4	5
11 ZIDUA PRO	6 fl oz/a A		86 ab	100 a
TAVIUM	56.5 fl oz/a B			0 b
ROUNDUP POWERMAX	26 fl oz/a B			
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019	
Rating Timing	A2	A2	A2	
Days After First/Last Applic.	28 28	28 28	28 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	4	5
12 VALOR SX	1.93 oz/a	A	78 abc	100 a
ZIDUA SC	2.4 fl oz/a	A		4 a
CLASSIC	1.07 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		
LSD P=.05	21.3	1.6	2.1	
Standard Deviation	14.8	1.1	1.4	
CV	19.35	1.09	423.39	
Grand Mean	76.3	99.8	0.3	
Levene's F	1.87	0.00		
Levene's Prob(F)	0.086	0.00*		
Rank X2	.	.	.	
P(Rank X2)	.	.	.	

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>			
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		Trial Y
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed	
Pest Code	AMBTR	SETFA	
Pest Scientific Name	Ambrosia trifida	Setaria faberi	
Pest Name	Giant ragweed	Giant foxtail	
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jul-2-2019	Jul-2-2019	Jul-2-2019
Part Rated	PLOT -	PLOT -	PLOT -
Rating Type	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%
Sample Size			
Number of Subsamples	1	1	1
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019
Rating Timing	A2	A2	A2
Days After First/Last Applic.	28 28	28 28	28 28
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1
ARM Action Codes	P	P	P
Number of Decimals	0	0	0
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
Skewness	-1.7226*	-4.5199*	5.2368*
Kurtosis	2.6388*	19.3061*	28.3454*
Replicate F	2.144	0.645	1.000
Replicate Prob(F)	0.1155	0.5921	0.4064
Treatment F	6.885	0.871	2.455
Treatment Prob(F)	0.0001	0.5690	0.0280

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y		
Trial ID: 19S-TPAC-SOY-14		Location: TPAC				
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson				
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer				
		Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed				
Pest Code	AMBTR	SETFA				
Pest Scientific Name	Ambrosia trifida	Setaria faberi				
Pest Name	Giant ragweed	Giant foxtail				
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA			
BBCH Scale	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean			
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019			
Part Rated	PLOT -	PLOT -	PLOT -			
Rating Type	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%			
Sample Size						
Number of Subsamples	1	1	1			
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER			
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019			
Rating Timing	A3	A3	A3			
Days After First/Last Applic.	41 13	41 13	41 13			
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A			
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1			
ARM Action Codes	P	P	P			
Number of Decimals	0	0	0			
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	7	8	9	
1 UNTREATED CHECK			0	0	0	
2 BOUNDARY	1.6 pt/a	A	95 bc	100 a	1 cd	
CANOPY @ 2.25 OZ/A		A				
TRICOR 75 DF	1.93 oz/a	A				
CLASSIC	0.963 oz/a	A				
TAVIUM	56.5 fl oz/a	B				
ROUNDUP POWERMAX	26 fl oz/a	B				
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A3	A3	A3		
Days After First/Last Applic.	41 13	41 13	41 13		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1		
Days After Emergence	33 DE-1	33 DE-1	33 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	7	8	9
3 BOUNDARY	1.8 pt/a	A	100 a	100 a	1 cd
XTENDIMAX	22 fl oz/a	A			
INTACT	0.5 % v/v	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			
4 BOUNDARY	1.8 pt/a	A	90 d	100 a	1 bcd
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A3	A3	A3		
Days After First/Last Applic.	41 13	41 13	41 13		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1		
Days After Emergence	33 DE-1	33 DE-1	33 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	7	8	9
5 BOUNDARY	1.8 pt/a	A	100 a	100 a	2 abc
XTENDIMAX	22 fl oz/a	A			
INTACT	0.5 % v/v	A			
FLEXSTAR GT 3.5	3.5 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS	2.5 % v/v	B			
6 BOUNDARY	1.8 pt/a	A	97 abc	100 a	1 cd
FIRSTRATE	0.5 oz/a	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y		
Trial ID: 19S-TPAC-SOY-14		Location: TPAC				
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson				
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer				
		Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed				
Pest Code	AMBTR	SETFA				
Pest Scientific Name	Ambrosia trifida	Setaria faberi				
Pest Name	Giant ragweed	Giant foxtail				
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA			
BBCH Scale	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean			
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019			
Part Rated	PLOT -	PLOT -	PLOT -			
Rating Type	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%			
Sample Size						
Number of Subsamples	1	1	1			
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER			
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019			
Rating Timing	A3	A3	A3			
Days After First/Last Applic.	41 13	41 13	41 13			
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A			
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1			
ARM Action Codes	P	P	P			
Number of Decimals	0	0	0			
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	7	8	9	
7 BOUNDARY	1.8 pt/a	A	95 bc	100 a	3 a	
CANOPY @ 2.25 OZ/A		A				
TRICOR 75 DF	1.93 oz/a	A				
CLASSIC	0.963 oz/a	A				
FLEXSTAR GT 3.5	3.5 pt/a	B				
MSO	1 % v/v	B				
N-PAK AMS	2.5 % v/v	B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y		
Trial ID: 19S-TPAC-SOY-14		Location: TPAC				
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson				
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer				
		Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed				
Pest Code	AMBTR	SETFA				
Pest Scientific Name	Ambrosia trifida	Setaria faberi				
Pest Name	Giant ragweed	Giant foxtail				
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA			
BBCH Scale	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean			
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019			
Part Rated	PLOT -	PLOT -	PLOT -			
Rating Type	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%			
Sample Size						
Number of Subsamples	1	1	1			
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER			
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019			
Rating Timing	A3	A3	A3			
Days After First/Last Applic.	41 13	41 13	41 13			
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A			
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1			
ARM Action Codes	P	P	P			
Number of Decimals	0	0	0			
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	7	8	9	
8 PREFIX	2 pt/a	A	99 a	100 a	1 cd	
CANOPY @ 2.25 OZ/A		A				
TRICOR 75 DF	1.93 oz/a	A				
CLASSIC	0.963 oz/a	A				
TAVIUM	56.5 fl oz/a	B				
ROUNDUP POWERMAX	26 fl oz/a	B				
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	SETFA			
Pest Scientific Name	Ambrosia trifida	Setaria faberi			
Pest Name	Giant ragweed	Giant foxtail			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%		
Sample Size					
Number of Subsamples	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER		
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing	A3	A3	A3		
Days After First/Last Applic.	41 13	41 13	41 13		
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1		
Days After Emergence	33 DE-1	33 DE-1	33 DE-1		
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	7	8	9
9 PREFIX	2 pt/a A		100 a	100 a	0 d
XTENDIMAX	22 fl oz/a A				
INTACT	0.5 % v/v A				
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				
10 SONIC	5 oz/a A		94 c	100 a	3 ab
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y		
Trial ID: 19S-TPAC-SOY-14		Location: TPAC				
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson				
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer				
		Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed				
Pest Code	AMBTR	SETFA				
Pest Scientific Name	Ambrosia trifida	Setaria faberi				
Pest Name	Giant ragweed	Giant foxtail				
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA			
BBCH Scale	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean			
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019			
Part Rated	PLOT -	PLOT -	PLOT -			
Rating Type	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%			
Sample Size						
Number of Subsamples	1	1	1			
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER			
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019			
Rating Timing	A3	A3	A3			
Days After First/Last Applic.	41 13	41 13	41 13			
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A			
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1			
ARM Action Codes	P	P	P			
Number of Decimals	0	0	0			
Trt Treatment	Rate	Appl				
No. Name	Rate	Unit Code	7	8	9	
11 ZIDUA PRO	6 fl oz/a	A	98 ab	100 a	1 cd	
TAVIUM	56.5 fl oz/a	B				
ROUNDUP POWERMAX	26 fl oz/a	B				
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>						Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC				
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson				
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer				
		Sponsor Contact: C. Threewits - Syngenta				
Pest Type		W Weed	W Weed			
Pest Code		AMBTR	SETFA			
Pest Scientific Name		Ambrosia trifida	Setaria faberi			
Pest Name		Giant ragweed	Giant foxtail			
Crop Type, Code		C GLXMA	C GLXMA	C GLXMA		
BBCH Scale		BSOY	BSOY	BSOY		
Crop Scientific Name		Glycine max	Glycine max	Glycine max		
Crop Name		Soybean	Soybean	Soybean		
Rating Date		Jul-15-2019	Jul-15-2019	Jul-15-2019		
Part Rated		PLOT -	PLOT -	PLOT -		
Rating Type		CONTRO	CONTRO	PHYGEN		
Rating Unit		%	%	%		
Sample Size						
Number of Subsamples		1	1	1		
Assessed By		M. ZIMMER	M. ZIMMER	M. ZIMMER		
Data Entry Date		Jul-2-2019	Jul-2-2019	Jun-20-2019		
Rating Timing		A3	A3	A3		
Days After First/Last Applic.		41 13	41 13	41 13		
Trt-Eval Interval		13 DA-A	13 DA-A	13 DA-A		
Plant-Eval Interval		42 DP-1	42 DP-1	42 DP-1		
Days After Emergence		33 DE-1	33 DE-1	33 DE-1		
ARM Action Codes		P	P	P		
Number of Decimals		0	0	0		
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	7	8	9	
12 VALOR SX	1.93 oz/a	A	95 bc	100 a	1 cd	
ZIDUA SC	2.4 fl oz/a	A				
CLASSIC	1.07 oz/a	A				
TAVIUM	56.5 fl oz/a	B				
ROUNDUP POWERMAX	26 fl oz/a	B				
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
LSD P=.05			3.7	.	1.4	
Standard Deviation			2.6	0.0	1.0	
CV			2.65	0.0	80.95	
Grand Mean			96.5	100.0	1.2	
Levene's F			2.914	0.00	0.95	
Levene's Prob(F)			0.01*	0.00*	0.503	
Rank X2			.	.	.	
P(Rank X2)			.	.	.	

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	SETFA		
Pest Scientific Name	Ambrosia trifida	Setaria faberi		
Pest Name	Giant ragweed	Giant foxtail		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-15-2019	Jul-15-2019	Jul-15-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	
Data Entry Date	Jul-2-2019	Jul-2-2019	Jun-20-2019	
Rating Timing	A3	A3	A3	
Days After First/Last Applic.	41 13	41 13	41 13	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1	
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	7	8
Skewness			-1.2802*	0.272
Kurtosis			0.7775	-1.6284*
Replicate F			2.878	0.000
Replicate Prob(F)			0.0524	1.0000
Treatment F			5.618	0.000
Treatment Prob(F)			0.0001	1.0000

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial ID
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		Trial Y
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-30-2019	Jul-30-2019	Jul-30-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Jun-20-2019	
Rating Timing	A4	A4	A4	
Days After First/Last Applic.	56 28	56 28	56 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	
Days After Emergence	48 DE-1	48 DE-1	48 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	10	11
1 UNTREATED CHECK			0	0
2 BOUNDARY	1.6 pt/a	A	100 a	100 a
CANOPY @ 2.25 OZ/A		A		
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial X		Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC					
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson					
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer					
Sponsor Contact: C. Threewits - Syngenta							
Pest Type	W Weed	W Weed					
Pest Code	AMBTR	ECHSS					
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.					
Pest Name	Giant ragweed	Barnyardgrass					
Crop Type, Code	C GLXMA	C GLXMA			C GLXMA		
BBCH Scale	BSOY	BSOY			BSOY		
Crop Scientific Name	Glycine max	Glycine max			Glycine max		
Crop Name	Soybean	Soybean			Soybean		
Rating Date	Jul-30-2019	Jul-30-2019			Jul-30-2019		
Part Rated	PLOT -	PLOT -			PLOT -		
Rating Type	CONTRO	CONTRO			PHYGEN		
Rating Unit	%	%			%		
Sample Size							
Number of Subsamples	1	1			1		
Assessed By	J. HAARMANN	J. HAARMANN			J. HAARMANN		
Data Entry Date	Jul-31-2019	Jul-31-2019			Jun-20-2019		
Rating Timing	A4	A4			A4		
Days After First/Last Applic.	56 28	56 28			56 28		
Trt-Eval Interval	13 DA-A	13 DA-A			13 DA-A		
Plant-Eval Interval	57 DP-1	57 DP-1			57 DP-1		
Days After Emergence	48 DE-1	48 DE-1			48 DE-1		
ARM Action Codes	P	P			P		
Number of Decimals	0	0			0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	10	11	12		
3 BOUNDARY	1.8 pt/a	A					
XTENDIMAX	22 fl oz/a	A	100 a	100 a	0 a		
INTACT	0.5 % v/v	A					
TAVIUM	56.5 fl oz/a	B					
ROUNDUP POWERMAX	26 fl oz/a	B					
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					
4 BOUNDARY	1.8 pt/a	A	100 a	100 a	0 a		
TAVIUM	56.5 fl oz/a	B					
ROUNDUP POWERMAX	26 fl oz/a	B					
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial X		Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC					
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson					
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer					
Sponsor Contact: C. Threewits - Syngenta							
Pest Type	W Weed	W Weed					
Pest Code	AMBTR	ECHSS					
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.					
Pest Name	Giant ragweed	Barnyardgrass					
Crop Type, Code	C GLXMA	C GLXMA			C GLXMA		
BBCH Scale	BSOY	BSOY			BSOY		
Crop Scientific Name	Glycine max	Glycine max			Glycine max		
Crop Name	Soybean	Soybean			Soybean		
Rating Date	Jul-30-2019	Jul-30-2019			Jul-30-2019		
Part Rated	PLOT -	PLOT -			PLOT -		
Rating Type	CONTRO	CONTRO			PHYGEN		
Rating Unit	%	%			%		
Sample Size							
Number of Subsamples	1	1			1		
Assessed By	J. HAARMANN	J. HAARMANN			J. HAARMANN		
Data Entry Date	Jul-31-2019	Jul-31-2019			Jun-20-2019		
Rating Timing	A4	A4			A4		
Days After First/Last Applic.	56 28	56 28			56 28		
Trt-Eval Interval	13 DA-A	13 DA-A			13 DA-A		
Plant-Eval Interval	57 DP-1	57 DP-1			57 DP-1		
Days After Emergence	48 DE-1	48 DE-1			48 DE-1		
ARM Action Codes	P	P			P		
Number of Decimals	0	0			0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	10	11	12		
5 BOUNDARY	1.8 pt/a	A					
XTENDIMAX	22 fl oz/a	A	100 a	100 a	0 a		
INTACT	0.5 % v/v	A					
FLEXSTAR GT 3.5	3.5 pt/a	B					
MSO	1 % v/v	B					
N-PAK AMS	2.5 % v/v	B					
6 BOUNDARY	1.8 pt/a	A	100 a	100 a	0 a		
FIRSTRATE	0.5 oz/a	A					
TAVIUM	56.5 fl oz/a	B					
ROUNDUP POWERMAX	26 fl oz/a	B					
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-30-2019	Jul-30-2019	Jul-30-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Jun-20-2019	
Rating Timing	A4	A4	A4	
Days After First/Last Applic.	56 28	56 28	56 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	
Days After Emergence	48 DE-1	48 DE-1	48 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	10	11
7 BOUNDARY	1.8 pt/a	A	100 a	100 a
CANOPY @ 2.25 OZ/A		A		0 a
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
FLEXSTAR GT 3.5	3.5 pt/a	B		
MSO	1 % v/v	B		
N-PAK AMS	2.5 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-30-2019	Jul-30-2019	Jul-30-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Jun-20-2019	
Rating Timing	A4	A4	A4	
Days After First/Last Applic.	56 28	56 28	56 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	
Days After Emergence	48 DE-1	48 DE-1	48 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	10	11
8 PREFIX	2 pt/a	A	100 a	100 a
CANOPY @ 2.25 OZ/A		A		0 a
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial ID: 19S-TPAC-SOY-14		Location: TPAC		Trial Y	
Protocol ID: 19S-TPAC-SOY-14				Investigator (Creator): Dr. Bill Johnson					
Project ID: H050DCAD-2019-US				Study Director: Dustin Johnson & Marcelo Zimmer					
				Sponsor Contact: C. Threewits - Syngenta					
Pest Type		W Weed		W Weed					
Pest Code		AMBTR		ECHSS					
Pest Scientific Name		Ambrosia trifida		Echinochloa sp.					
Pest Name		Giant ragweed		Barnyardgrass					
Crop Type, Code		C GLXMA		C GLXMA		C GLXMA			
BBCH Scale		BSOY		BSOY		BSOY			
Crop Scientific Name		Glycine max		Glycine max		Glycine max			
Crop Name		Soybean		Soybean		Soybean			
Rating Date		Jul-30-2019		Jul-30-2019		Jul-30-2019			
Part Rated		PLOT -		PLOT -		PLOT -			
Rating Type		CONTRO		CONTRO		PHYGEN			
Rating Unit		%		%		%			
Sample Size									
Number of Subsamples		1		1		1			
Assessed By		J. HAARMANN		J. HAARMANN		J. HAARMANN			
Data Entry Date		Jul-31-2019		Jul-31-2019		Jun-20-2019			
Rating Timing		A4		A4		A4			
Days After First/Last Applic.		56 28		56 28		56 28			
Trt-Eval Interval		13 DA-A		13 DA-A		13 DA-A			
Plant-Eval Interval		57 DP-1		57 DP-1		57 DP-1			
Days After Emergence		48 DE-1		48 DE-1		48 DE-1			
ARM Action Codes		P		P		P			
Number of Decimals		0		0		0			
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	10	11	12				
9 PREFIX	2 pt/a	A	100 a	100 a	0 a				
XTENDIMAX	22 fl oz/a	A							
INTACT	0.5 % v/v	A							
TAVIUM	56.5 fl oz/a	B							
ROUNDUP POWERMAX	26 fl oz/a	B							
INTACT	0.5 % v/v	B							
CLASS ACT RIDION	1 % v/v	B							
10 SONIC	5 oz/a	A	100 a	100 a	0 a				
TAVIUM	56.5 fl oz/a	B							
ROUNDUP POWERMAX	26 fl oz/a	B							
INTACT	0.5 % v/v	B							
CLASS ACT RIDION	1 % v/v	B							

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			
Trial ID: 19S-TPAC-SOY-14	Location: TPAC	Trial Y	
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta			

Pest Type	W Weed	W Weed	
Pest Code	AMBTR	ECHSS	
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.	
Pest Name	Giant ragweed	Barnyardgrass	
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jul-30-2019	Jul-30-2019	Jul-30-2019
Part Rated	PLOT -	PLOT -	PLOT -
Rating Type	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%
Sample Size			
Number of Subsamples	1	1	1
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN
Data Entry Date	Jul-31-2019	Jul-31-2019	Jun-20-2019
Rating Timing	A4	A4	A4
Days After First/Last Applic.	56 28	56 28	56 28
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1
Days After Emergence	48 DE-1	48 DE-1	48 DE-1
ARM Action Codes	P	P	P
Number of Decimals	0	0	0
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			10
			11
			12
11 ZIDUA PRO	6 fl oz/a A		100 a
TAVIUM	56.5 fl oz/a B		100 a
ROUNDUP POWERMAX	26 fl oz/a B		0 a
INTACT	0.5 % v/v B		
CLASS ACT RIDION	1 % v/v B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Jul-30-2019	Jul-30-2019	Jul-30-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	PHYGEN	
Rating Unit	%	%	%	
Sample Size				
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Jun-20-2019	
Rating Timing	A4	A4	A4	
Days After First/Last Applic.	56 28	56 28	56 28	
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A	
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	
Days After Emergence	48 DE-1	48 DE-1	48 DE-1	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	10	11
12 VALOR SX	1.93 oz/a	A	100 a	100 a
ZIDUA SC	2.4 fl oz/a	A		0 a
CLASSIC	1.07 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		
LSD P=.05	0.5	.	.	.
Standard Deviation	0.3	0.0	0.0	0.0
CV	0.34	0.0	0.0	0.0
Grand Mean	99.9	100.0	100.0	0.0
Levene's F	0.92	0.00	0.00	0.00
Levene's Prob(F)	0.527	0.00*	0.00*	0.00*
Rank X2	.	.	.	.
P(Rank X2)	.	.	.	.

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>			
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		Trial Y
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed	
Pest Code	AMBTR	ECHSS	
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.	
Pest Name	Giant ragweed	Barnyardgrass	
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jul-30-2019	Jul-30-2019	Jul-30-2019
Part Rated	PLOT -	PLOT -	PLOT -
Rating Type	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%
Sample Size			
Number of Subsamples	1	1	1
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN
Data Entry Date	Jul-31-2019	Jul-31-2019	Jun-20-2019
Rating Timing	A4	A4	A4
Days After First/Last Applic.	56 28	56 28	56 28
Trt-Eval Interval	13 DA-A	13 DA-A	13 DA-A
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1
Days After Emergence	48 DE-1	48 DE-1	48 DE-1
ARM Action Codes	P	P	P
Number of Decimals	0	0	0
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
	10	11	12
Skewness	-5.2368*	.	.
Kurtosis	28.3454*	.	.
Replicate F	0.714	0.000	0.000
Replicate Prob(F)	0.5512	1.0000	1.0000
Treatment F	0.896	0.000	0.000
Treatment Prob(F)	0.5480	1.0000	1.0000

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	ECHSS			
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.			
Pest Name	Giant ragweed	Barnyardgrass			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	YIELD		
Rating Unit	%	%	lb/plot		
Sample Size			1 PLOT		
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019		
Rating Timing	A5	A5	H1		
Days After First/Last Applic.	70 42	70 42	127 99		
Trt-Eval Interval	13 DA-A	13 DA-A			
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1		
Days After Emergence	62 DE-1	62 DE-1	119 DE-1		
ARM Action Codes	P	P			
Number of Decimals	0	0	1		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	13	14	15
1 UNTREATED CHECK			0	0	12.2
2 BOUNDARY	1.6 pt/a	A	100 a	100 a	24.1 a
CANOPY @ 2.25 OZ/A		A			
TRICOR 75 DF	1.93 oz/a	A			
CLASSIC	0.963 oz/a	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
3 BOUNDARY	1.8 pt/a	A	100 a	100 a
XTENDIMAX	22 fl oz/a	A		24.5 a
INTACT	0.5 % v/v	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		
4 BOUNDARY	1.8 pt/a	A	100 a	100 a
TAVIUM	56.5 fl oz/a	B		24.5 a
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
5 BOUNDARY	1.8 pt/a A		99 a	100 a
XTENDIMAX	22 fl oz/a A			25.6 a
INTACT	0.5 % v/v A			
FLEXSTAR GT 3.5	3.5 pt/a B			
MSO	1 % v/v B			
N-PAK AMS	2.5 % v/v B			
6 BOUNDARY	1.8 pt/a A		100 a	100 a
FIRSTRATE	0.5 oz/a A			25.0 a
TAVIUM	56.5 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
7 BOUNDARY	1.8 pt/a	A	100 a	100 a
CANOPY @ 2.25 OZ/A		A		23.4 a
TRICOR 75 DF	1.93 oz/a	A		
CLASSIC	0.963 oz/a	A		
FLEXSTAR GT 3.5	3.5 pt/a	B		
MSO	1 % v/v	B		
N-PAK AMS	2.5 % v/v	B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type	W Weed	W Weed			
Pest Code	AMBTR	ECHSS			
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.			
Pest Name	Giant ragweed	Barnyardgrass			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean		
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019		
Part Rated	PLOT -	PLOT -	PLOT -		
Rating Type	CONTRO	CONTRO	YIELD		
Rating Unit	%	%	lb/plot		
Sample Size			1 PLOT		
Number of Subsamples	1	1	1		
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN		
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019		
Rating Timing	A5	A5	H1		
Days After First/Last Applic.	70 42	70 42	127 99		
Trt-Eval Interval	13 DA-A	13 DA-A			
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1		
Days After Emergence	62 DE-1	62 DE-1	119 DE-1		
ARM Action Codes	P	P			
Number of Decimals	0	0	1		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	13	14	15
8 PREFIX	2 pt/a	A	100 a	100 a	25.2 a
CANOPY @ 2.25 OZ/A		A			
TRICOR 75 DF	1.93 oz/a	A			
CLASSIC	0.963 oz/a	A			
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	26 fl oz/a	B			
INTACT	0.5 % v/v	B			
CLASS ACT RIDION	1 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
9 PREFIX	2 pt/a A		100 a	100 a
XTENDIMAX	22 fl oz/a A			
INTACT	0.5 % v/v A			
TAVIUM	56.5 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			
10 SONIC	5 oz/a A		100 a	100 a
TAVIUM	56.5 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
11 ZIDUA PRO	6 fl oz/a A		100 a	100 a
TAVIUM	56.5 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			24.2 a

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

<b>Herbicide programs for Control of Giant Ragweed in Xtend Soybean</b>				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
12 VALOR SX	1.93 oz/a	A	100 a	100 a
ZIDUA SC	2.4 fl oz/a	A		
CLASSIC	1.07 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	26 fl oz/a	B		
INTACT	0.5 % v/v	B		
CLASS ACT RIDION	1 % v/v	B		
LSD P=.05			0.7	. 2.16
Standard Deviation			0.5	0.0 1.50
CV			0.46	0.0 6.09
Grand Mean			99.8	100.0 24.60
Levene's F			2.967	0.00 1.813
Levene's Prob(F)			0.009*	0.00* 0.097
Rank X2			.	.
P(Rank X2)			.	.

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y
Trial ID: 19S-TPAC-SOY-14		Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta				
Pest Type	W Weed	W Weed		
Pest Code	AMBTR	ECHSS		
Pest Scientific Name	Ambrosia trifida	Echinochloa sp.		
Pest Name	Giant ragweed	Barnyardgrass		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	Aug-13-2019	Aug-13-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	PLOT -	
Rating Type	CONTRO	CONTRO	YIELD	
Rating Unit	%	%	lb/plot	
Sample Size			1 PLOT	
Number of Subsamples	1	1	1	
Assessed By	J. HAARMANN	J. HAARMANN	J. HAARMANN	
Data Entry Date	Jul-31-2019	Jul-31-2019	Oct-22-2019	
Rating Timing	A5	A5	H1	
Days After First/Last Applic.	70 42	70 42	127 99	
Trt-Eval Interval	13 DA-A	13 DA-A		
Plant-Eval Interval	71 DP-1	71 DP-1	128 DP-1	
Days After Emergence	62 DE-1	62 DE-1	119 DE-1	
ARM Action Codes	P	P		
Number of Decimals	0	0	1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
Skewness			-2.9208*	-0.2858
Kurtosis			7.3728*	0.7087
Replicate F			3.453	0.000
Replicate Prob(F)			0.0287	1.0000
Treatment F			1.921	0.000
Treatment Prob(F)			0.0816	1.0000

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
	Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16 17
1 UNTREATED CHECK			11.4 38.7
2 BOUNDARY	1.6 pt/a	A	11.0 a 76.7 a
CANOPY @ 2.25 OZ/A		A	
TRICOR 75 DF	1.93 oz/a	A	
CLASSIC	0.963 oz/a	A	
TAVIUM	56.5 fl oz/a	B	
ROUNDUP POWERMAX	26 fl oz/a	B	
INTACT	0.5 % v/v	B	
CLASS ACT RIDION	1 % v/v	B	

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
	Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16
			17
3 BOUNDARY	1.8 pt/a A		11.1 a
XTENDIMAX	22 fl oz/a A		77.8 a
INTACT	0.5 % v/v A		
TAVIUM	56.5 fl oz/a B		
ROUNDUP POWERMAX	26 fl oz/a B		
INTACT	0.5 % v/v B		
CLASS ACT RIDION	1 % v/v B		
4 BOUNDARY	1.8 pt/a A		10.9 a
TAVIUM	56.5 fl oz/a B		78.2 a
ROUNDUP POWERMAX	26 fl oz/a B		
INTACT	0.5 % v/v B		
CLASS ACT RIDION	1 % v/v B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
	Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16
			17
5 BOUNDARY	1.8 pt/a A		11.0 a
XTENDIMAX	22 fl oz/a A		81.5 a
INTACT	0.5 % v/v A		
FLEXSTAR GT 3.5	3.5 pt/a B		
MSO	1 % v/v B		
N-PAK AMS	2.5 % v/v B		
6 BOUNDARY	1.8 pt/a A		11.0 a
FIRSTRATE	0.5 oz/a A		79.6 a
TAVIUM	56.5 fl oz/a B		
ROUNDUP POWERMAX	26 fl oz/a B		
INTACT	0.5 % v/v B		
CLASS ACT RIDION	1 % v/v B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
		Sponsor Contact: C. Threewits - Syngenta			
Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Type, Code	C GLXMA	C GLXMA			
BBCH Scale	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max			
Crop Name	Soybean	Soybean			
Rating Date	Oct-9-2019	Oct-9-2019			
Part Rated	PLOT -	PLOT -			
Rating Type	MOICON	YIELD			
Rating Unit	%	BU			
Sample Size		1 A			
Number of Subsamples	1	1			
Assessed By	J HAARMANN	J. HAARMANN			
Data Entry Date	Oct-22-2019	Oct-22-2019			
Rating Timing	H1	H1			
Days After First/Last Applic.	127 99	127 99			
Trt-Eval Interval					
Plant-Eval Interval	128 DP-1	128 DP-1			
Days After Emergence	119 DE-1	119 DE-1			
ARM Action Codes		TY1			
Number of Decimals	1	1			
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	16	17	
7 BOUNDARY	1.8 pt/a	A	10.7 a	74.7 a	
CANOPY @ 2.25 OZ/A		A			
TRICOR 75 DF	1.93 oz/a	A			
CLASSIC	0.963 oz/a	A			
FLEXSTAR GT 3.5	3.5 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS	2.5 % v/v	B			

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
	Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16
			17
8 PREFIX	2 pt/a	A	11.1 a
CANOPY @ 2.25 OZ/A		A	80.0 a
TRICOR 75 DF	1.93 oz/a	A	
CLASSIC	0.963 oz/a	A	
TAVIUM	56.5 fl oz/a	B	
ROUNDUP POWERMAX	26 fl oz/a	B	
INTACT	0.5 % v/v	B	
CLASS ACT RIDION	1 % v/v	B	

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
	Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16
			17
9 PREFIX	2 pt/a A		11.1 a
XTENDIMAX	22 fl oz/a A		82.1 a
INTACT	0.5 % v/v A		
TAVIUM	56.5 fl oz/a B		
ROUNDUP POWERMAX	26 fl oz/a B		
INTACT	0.5 % v/v B		
CLASS ACT RIDION	1 % v/v B		
10 SONIC	5 oz/a A		11.0 a
TAVIUM	56.5 fl oz/a B		76.8 a
ROUNDUP POWERMAX	26 fl oz/a B		
INTACT	0.5 % v/v B		
CLASS ACT RIDION	1 % v/v B		

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean				Trial Y	
Trial ID: 19S-TPAC-SOY-14		Location: TPAC			
Protocol ID: 19S-TPAC-SOY-14		Investigator (Creator): Dr. Bill Johnson			
Project ID: H050DCAD-2019-US		Study Director: Dustin Johnson & Marcelo Zimmer			
				Sponsor Contact: C. Threewits - Syngenta	
Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Type, Code	C GLXMA	C GLXMA			
BBCH Scale	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max			
Crop Name	Soybean	Soybean			
Rating Date	Oct-9-2019	Oct-9-2019			
Part Rated	PLOT -	PLOT -			
Rating Type	MOICON	YIELD			
Rating Unit	%	BU			
Sample Size		1 A			
Number of Subsamples	1	1			
Assessed By	J HAARMANN	J. HAARMANN			
Data Entry Date	Oct-22-2019	Oct-22-2019			
Rating Timing	H1	H1			
Days After First/Last Applic.	127 99	127 99			
Trt-Eval Interval					
Plant-Eval Interval	128 DP-1	128 DP-1			
Days After Emergence	119 DE-1	119 DE-1			
ARM Action Codes		TY1			
Number of Decimals	1	1			
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	16	17	
11 ZIDUA PRO	6 fl oz/a A		11.1 a	76.9 a	
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
INTACT	0.5 % v/v B				
CLASS ACT RIDION	1 % v/v B				

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
	Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16
			17
12 VALOR SX	1.93 oz/a	A	11.1 a
ZIDUA SC	2.4 fl oz/a	A	77.2 a
CLASSIC	1.07 oz/a	A	
TAVIUM	56.5 fl oz/a	B	
ROUNDUP POWERMAX	26 fl oz/a	B	
INTACT	0.5 % v/v	B	
CLASS ACT RIDION	1 % v/v	B	
LSD P=.05			0.40
Standard Deviation			0.28
CV			2.55
Grand Mean			10.99
Levene's F			0.741
Levene's Prob(F)			0.681
Rank X2			.
P(Rank X2)			.

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

Herbicide programs for Control of Giant Ragweed in Xtend Soybean			Trial Y
Trial ID: 19S-TPAC-SOY-14	Location: TPAC		
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson		
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer		
Sponsor Contact: C. Threewits - Syngenta			

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Oct-9-2019	Oct-9-2019	
Part Rated	PLOT -	PLOT -	
Rating Type	MOICON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	J HAARMANN	J. HAARMANN	
Data Entry Date	Oct-22-2019	Oct-22-2019	
Rating Timing	H1	H1	
Days After First/Last Applic.	127 99	127 99	
Trt-Eval Interval			
Plant-Eval Interval	128 DP-1	128 DP-1	
Days After Emergence	119 DE-1	119 DE-1	
ARM Action Codes		TY1	
Number of Decimals	1	1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			16 17
Skewness	-0.0648	-0.3345	
Kurtosis	-0.6264	0.8155	
Replicate F	1.496	1.714	
Replicate Prob(F)	0.2358	0.1851	
Treatment F	0.717	0.878	
Treatment Prob(F)	0.7021	0.5634	

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 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 8,11,12,14 because error mean square = 0.

# Purdue Weed Science

## Herbicide programs for Control of Giant Ragweed in Xtend Soybean

Trial ID: 19S-TPAC-SOY-14	Location: TPAC	Trial Y
Protocol ID: 19S-TPAC-SOY-14	Investigator (Creator): Dr. Bill Johnson	
Project ID: H050DCAD-2019-US	Study Director: Dustin Johnson & Marcelo Zimmer	
	Sponsor Contact: C. Threewits - Syngenta	

### Pest Type

W, Weed = Weed or volunteer crop

### Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

SETFA, Setaria faberi, Giant foxtail = US

ECHSS, Echinochloa sp., Barnyardgrass = US

### Crop Type, Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

### Part Rated

PLOT = plot

### 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

PLOT = total plot

A = acre

### Rating Timing

A1 = 1st Assessment According to Trial Schedule

A2 = 2nd Assessment According to trial Schedule

A3 = 3rd Assessment According to Trial Schedule

A4 = 4th Assessment According to Trial Schedule

A5 = 5th Assessment According to Trial Schedule

H1 = 1st Harvest

### Plant-Eval Interval

15 DP-1 = 1 GLXMA Jun-3-2019

29 DP-1 = 1 GLXMA Jun-3-2019

42 DP-1 = 1 GLXMA Jun-3-2019

57 DP-1 = 1 GLXMA Jun-3-2019

71 DP-1 = 1 GLXMA Jun-3-2019

128 DP-1 = 1 GLXMA Jun-3-2019

### ARM Action Codes

P = Rating scale of 0 to 100 (e.g. % control or injury)

TY1 =  $3.111428 * [15] * (100 - [16]) / 87$