

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-SOY-09 Investigator: Dr. Bill Johnson
 Project ID: EHLSoy03-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

General Trial Information

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

Discipline: H herbicide
Trial Status: E established
Initiation Date: May-17-2017

Trial Location

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

Latitude of LL Corner °: 40.29176 N
Longitude of LL Corner °: 86.90753 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

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

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

Cooperator/Landowner

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

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: XTEND AG30X6
Description: DICAMBA/RR

Planting Rate, Unit: 155000 S/A
Depth, Unit: 1.25 IN
Row Spacing, Unit: 15 IN

Planting Date: May-17-2017
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter
Emergence Date: May-27-2017

Soil Temperature, Unit: 69 F
Soil Moisture: SLIDRY slightly dry

Harvested Width, Unit: 10 FT
Harvested Length, Unit: 25 FT
% Standard Moisture: 13

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT2 **Treatments:** 10
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: TPAC -Field 4A
% OM: 3.1 **Texture:** SIL silt loam
pH: 6 **Soil Name:** Toronto-Millbrook
CEC: 11.1

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-SOY-09 Investigator: Dr. Bill Johnson
 Project ID: EHLSoy03-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Application Description

	A	B
Application Date:	May-18-2017	Jul-20-2017
Appl. Start Time:	5:35 PM	8:40 AM
Appl. Stop Time:	5:52 PM	8:50 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPLA	PREPLA
Application Placement:	BROADC	BROADC
Applied By:	M. ZIMMER	M. ZIMMER
Air Temperature, Unit:	89 F	67 F
% Relative Humidity:	42	72
Wind Velocity, Unit:	14 MPH	5 MPH
Wind Direction:	SW	SSW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	81 F	64 F
Soil Moisture:	DRY	SLIWET
% Cloud Cover:	35	10

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH
Stage Majority, Percent:		14
Stage Minimum, Percent:		13
Stage Maximum, Percent:		15
Height, Unit:		7 IN
Height Minimum, Maximum:		6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		15
Stage Minimum, Percent:		10
Stage Maximum, Percent:		19
Height, Unit:		8 IN
Height Minimum, Maximum:		0.5 14

Application Equipment

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

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-SOY-09	Investigator: Dr. Bill Johnson	
Project ID: EHLSoy03-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Trt No	Treatment	Application	Comment
--------	-----------	-------------	---------

5	Threw out plot 503 pre-B app.	ratings due to being high where as all other	trt 5 plots were all 0.
---	-------------------------------	--	-------------------------

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-SOY-09 Investigator: Dr. Bill Johnson
 Project ID: EHLSoy03-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Reps: 4 Plots: 10 by 30 feet
 Spray vol: 15 GAL/AC Mix Size: 1.8 liters (1.5642 liters calculated mix size)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Appl Unit	Code	Amt to Measure	Rep			
									1	2	3	4
1	UNTREATED CHECK								101	303	601	801
2	PREFIX	5.29	LB/GAL	EC	2 pt/a	A		30.0 ml/mx	102	301	504	804
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
	INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx				
3	PREFIX	5.29	LB/GAL	EC	2 pt/a	A		30.0 ml/mx	103	404	605	704
	TRICOR DF	75 %		DF	6 oz/a	A		5.392 g/mx				
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx					
4	PREFIX	5.29	LB/GAL	EC	2 pt/a	A		30.0 ml/mx	104	304	501	805
	CANOPY	75 %		DG	2.25 oz/a	A		2.022 g/mx				
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx					
5	BOUNDARY	6.5	LB/GAL	EC	1.75 pt/a	A		26.25 ml/mx	105	405	503	705
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
	INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx				
6	BOUNDARY	6.5	LB/GAL	EC	1.75 pt/a	A		26.25 ml/mx	201	402	602	803
	CANOPY	75 %		DG	2.25 oz/a	A		2.022 g/mx				
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx					
7	BOUNDARY	6.5	LB/GAL	EC	1.75 pt/a	A		26.25 ml/mx	202	401	604	701
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	A		20.62 ml/mx				
	AG13063	100 %		L	1 % v/v	A		18.0 ml/mx				
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
AG13063	100 %		L	1 % v/v	B		18.0 ml/mx					
INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx					
8	BROADAXE XC	7	LB/GAL	L	25 fl oz/a	A		23.44 ml/mx	203	305	603	702
	TRICOR DF	75 %		DF	6 oz/a	A		5.392 g/mx				
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx					
9	SONIC	70 %		WG	4.5 oz/a	A		4.044 g/mx	204	302	505	802
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
	INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx				
10	ZIDUA PRO	4.09	LB/GAL	SC	6 fl oz/a	A		5.625 ml/mx	205	403	502	703
	XTENDIMAX	2.9	LBAE/GAL	SL	22 fl oz/a	B		20.62 ml/mx				
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	B		24.37 ml/mx				
	AG13063	100 %		L	1 % v/v	B		18.0 ml/mx				
	INTACT	100 %		L	0.5 % v/v	B		8.999 ml/mx				

Sort Order: Replicate 1

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

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-SOY-09	Investigator: Dr. Bill Johnson	
Project ID: EHLSoy03-2017	Study Director: Dustin Johnson	
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
112.500	ml	PREFIX	5.29	LB/GAL	EC	
257.812	ml	XTENDIMAX	2.9	LBAE/GAL	SL	
274.219	ml	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	
224.976	ml	AG13063	100	%	L	
101.239	ml	INTACT	100	%	L	
13.480	g	TRICOR DF	75	%	DF	
5.055	g	CANOPY	75	%	DG	
98.437	ml	BOUNDARY	6.5	LB/GAL	EC	
29.297	ml	BROADAXE XC	7	LB/GAL	L	
5.055	g	SONIC	70	%	WG	
7.031	ml	ZIDUA PRO	4.09	LB/GAL	SC	

* 'Per area' calculations based on spray volume= 15 GAL/AC, mix size= 1.8 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

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

Trial Comments

6/2/17-Did not rate crop injury due to soybeans being so small.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans						
Trial ID: 17S-TPAC-SOY-09		Location: TPAC		Trial Year: 2017		
Protocol ID: 17S-TPAC-SOY-09		Investigator: Dr. Bill Johnson				
Project ID: EHLSoy03-2017		Study Director: Dustin Johnson				
Sponsor Contact: C. Threewits - Syngenta						

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	AMBTR		AMBTR	AMBTR
Pest Name	Giant ragweed	Giant ragweed		Giant ragweed	Giant ragweed
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jun-2-2017	Jun-9-2017	Jun-9-2017	Jun-14-2017	Jun-14-2017
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	M. ZIMMER	D. JOHNSON	D. JOHNSON	M. ZIMMER	M. ZIMMER
Rating Timing	A1	A2	A2	A3	A3
Days After First/Last Applic.	15 15	22 22	22 22	27 27	27 27
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A
Days After Emergence	6 DE-1	13 DE-1	13 DE-1	18 DE-1	18 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
1 UNTREATED CHECK			0 b	0 b	0 a
2 PREFIX	2 pt/a A		98 a	94 a	1 a
XTENDIMAX	22 fl oz/a B				91 a
ROUNDUP POWERMAX	26 fl oz/a B				0 a
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				88 a
3 PREFIX	2 pt/a A		98 a	93 a	0 a
TRICOR DF	6 oz/a A				92 a
XTENDIMAX	22 fl oz/a B				0 a
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				87 a
4 PREFIX	2 pt/a A		95 a	90 a	0 a
CANOPY	2.25 oz/a A				85 a
XTENDIMAX	22 fl oz/a B				0 a
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				79 a
5 BOUNDARY	1.75 pt/a A		1 b	2 b	0 a
XTENDIMAX	22 fl oz/a B				2 c
ROUNDUP POWERMAX	26 fl oz/a B				0 a
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				2 c
6 BOUNDARY	1.75 pt/a A		83 a	78 a	1 a
CANOPY	2.25 oz/a A				56 b
XTENDIMAX	22 fl oz/a B				0 a
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				59 ab
7 BOUNDARY	1.75 pt/a A		98 a	93 a	1 a
XTENDIMAX	22 fl oz/a A				91 a
AG13063	1 % v/v A				0 a
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				85 a
8 BROADAXE XC	25 fl oz/a A		88 a	78 a	0 a
TRICOR DF	6 oz/a A				55 b
XTENDIMAX	22 fl oz/a B				0 a
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				51 b

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=1,2,4,6,16
 Could not calculate LSD (% mean diff) for columns 5,7,9 because error mean square = 0.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	AMBTR		AMBTR		AMBTR		
Pest Name	Giant ragweed	Giant ragweed		Giant ragweed		Giant ragweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-2-2017	Jun-9-2017	Jun-9-2017	Jun-14-2017	Jun-14-2017	Jun-20-2017		
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	PHYGEN	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	D. JOHNSON	D. JOHNSON	M. ZIMMER	M. ZIMMER	M. ZIMMER		
Rating Timing	A1	A2	A2	A3	A3	A4		
Days After First/Last Applic.	15 15	22 22	22 22	27 27	27 27	33 33		
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A		
Days After Emergence	6 DE-1	13 DE-1	13 DE-1	18 DE-1	18 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
9 SONIC	4.5 oz/a	A	73 a	68 a	1 a	44 b	0 a	46 b
XTENDIMAX	22 fl oz/a	B						
ROUNDUP POWERMAX	26 fl oz/a	B						
AG13063	1 % v/v	B						
INTACT	0.5 % v/v	B						
10 ZIDUA PRO	6 fl oz/a	A	95 a	88 a	1 a	84 a	0 a	81 a
XTENDIMAX	22 fl oz/a	B						
ROUNDUP POWERMAX	26 fl oz/a	B						
AG13063	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			18.4	17.0	1.8	17.5	.	19.9
Standard Deviation			12.6	11.7	1.2	12.0	0.0	13.7
CV			17.41	17.16	292.68	20.08	0.0	23.7
Bartlett's X2			35.789	28.232	4.468	14.2	0.0	18.256
P(Bartlett's X2)			0.001*	0.001*	0.346	0.048*	.	0.011*
Skewness			-1.4305*	-1.3713*	3.04*	-0.8187*	.	-0.919*
Kurtosis			0.2477	0.171	8.6408*	-0.8086	.	-0.7579
Replicate F			0.786	1.403	1.826	1.444	0.000	1.477
Replicate Prob(F)			0.5126	0.2644	0.1663	0.2527	1.0000	0.2440
Treatment F			37.513	38.732	0.684	34.840	0.000	23.889
Treatment Prob(F)			0.0001	0.0001	0.7166	0.0001	1.0000	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=1,2,4,6,16
 Could not calculate LSD (% mean diff) for columns 5,7,9 because error mean square = 0.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type			W Weed			W Weed			W Weed			W Weed
Pest Code			AMBTR			AMBTR			AMBTR			AMBTR
Pest Name			Giant ragweed			Giant ragweed			Giant ragweed			Giant ragweed
Crop Code	GLXMA		GLXMA		GLXMA		GLXMA		GLXMA		GLXMA	
Crop Name	Soybean		Soybean		Soybean		Soybean		Soybean		Soybean	
Part Rated	PLOT -		PLOT -		PLOT -		PLOT -		PLOT -		PLOT -	
Rating Date	Jun-20-2017		Jun-28-2017		Jun-28-2017		Jul-5-2017		Jul-12-2017		Jul-19-2017	
Rating Type	PHYGEN		CONTROL		PHYGEN		CONTROL		CONTROL		CONTROL	
Rating Unit	%		%		%		%		%		%	
Number of Subsamples	1		1		1		1		1		1	
Assessed By	M. ZIMMER		M. ZIMMER		M. ZIMMER		M. ZIMMER		D. JOHNSON		D. JOHNSON	
Rating Timing	A4		A5		A5		A6		A7		A8	
Days After First/Last Applic.	33 33		41 41		41 41		48 48		55 55		62 62	
Trt-Eval Interval	22 DA-A		22 DA-A		22 DA-A		22 DA-A		22 DA-A		22 DA-A	
Days After Emergence	24 DE-1		32 DE-1		32 DE-1		39 DE-1		46 DE-1		53 DE-1	
ARM Action Codes	P		P		P		P		P		P	
Number of Decimals	0		0		0		0		0		0	
Trt Treatment	Rate	Appl										
No. Name	Rate Unit	Code	7	8	9	10	11	12				
1 UNTREATED CHECK			0 a	0 c	0 a	0 d	0 c	0 b				
2 PREFIX	2 pt/a	A	0 a	94 a	0 a	99 a	100 a	100 a				
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										
3 PREFIX	2 pt/a	A	0 a	94 a	0 a	98 a	100 a	100 a				
TRICOR DF	6 oz/a	A										
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										
4 PREFIX	2 pt/a	A	0 a	91 a	0 a	97 a	100 a	100 a				
CANOPY	2.25 oz/a	A										
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										
5 BOUNDARY	1.75 pt/a	A	0 a	81 b	0 a	88 c	92 b	97 a				
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										
6 BOUNDARY	1.75 pt/a	A	0 a	86 b	0 a	94 ab	97 a	99 a				
CANOPY	2.25 oz/a	A										
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										
7 BOUNDARY	1.75 pt/a	A	0 a	95 a	0 a	98 a	100 a	100 a				
XTENDIMAX	22 fl oz/a	A										
AG13063	1 % v/v	A										
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										
8 BROADAXE XC	25 fl oz/a	A	0 a	85 b	0 a	92 bc	97 a	97 a				
TRICOR DF	6 oz/a	A										
XTENDIMAX	22 fl oz/a	B										
ROUNDUP POWERMAX	26 fl oz/a	B										
AG13063	1 % v/v	B										
INTACT	0.5 % v/v	B										

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=1,2,4,6,16
 Could not calculate LSD (% mean diff) for columns 5,7,9 because error mean square = 0.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type		W Weed		W Weed		W Weed		
Pest Code		AMBTR		AMBTR		AMBTR		
Pest Name		Giant ragweed		Giant ragweed		Giant ragweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-20-2017	Jun-28-2017	Jun-28-2017	Jul-5-2017	Jul-12-2017	Jul-19-2017		
Rating Type	PHYGEN	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON	D. JOHNSON		
Rating Timing	A4	A5	A5	A6	A7	A8		
Days After First/Last Applic.	33 33	41 41	41 41	48 48	55 55	62 62		
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A		
Days After Emergence	24 DE-1	32 DE-1	32 DE-1	39 DE-1	46 DE-1	53 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit Code		7	8	9	10	11	12
9 SONIC	4.5 oz/a A		0 a	83 b	0 a	92 bc	97 a	98 a
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	26 fl oz/a B							
AG13063	1 % v/v B							
INTACT	0.5 % v/v B							
10 ZIDUA PRO	6 fl oz/a A		0 a	93 a	0 a	95 ab	98 a	99 a
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	26 fl oz/a B							
AG13063	1 % v/v B							
INTACT	0.5 % v/v B							
LSD P=.05				4.0		3.4	3.3	2.8
Standard Deviation	0.0		0.0	2.7	0.0	2.3	2.3	1.9
CV	0.0		0.0	3.41	0.0	2.75	2.58	2.16
Bartlett's X2	0.0		0.0	3.792	0.0	11.69	9.709	6.885
P(Bartlett's X2)				0.803		0.166	0.084	0.142
Skewness				-2.5694*		-2.6773*	-2.7199*	-2.7489*
Kurtosis				5.2805*		5.6494*	5.7963*	5.8977*
Replicate F	0.000		0.000	2.874	0.000	3.693	0.612	0.804
Replicate Prob(F)	1.0000		1.0000	0.0547	1.0000	0.0239	0.6129	0.5025
Treatment F	0.000		0.000	439.341	0.000	658.942	747.141	1060.765
Treatment Prob(F)	1.0000		1.0000	0.0001	1.0000	0.0001	0.0001	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=1,2,4,6,16
 Could not calculate LSD (% mean diff) for columns 5,7,9 because error mean square = 0.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

W Weed	W Weed			
AMBTR	AMBTR			
Giant ragweed	Giant ragweed			
GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Soybean	Soybean	Soybean	Soybean	Soybean
PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Aug-1-2017	Aug-18-2017	Nov-1-2017	Nov-1-2017	Nov-1-2017
CONTROL	CONTROL	YIELD	MOICON	YIELD
%	%	LB	%	BU
1	1	1	1	1
D. JOHNSON	D. JOHNSON	T. CAMPBELL	T. CAMPBELL	T. CAMPBELL
A9	AA			
75 12	92 29	167 104	167 104	167 104
22 DA-A	22 DA-A			
66 DE-1	83 DE-1	158 DE-1	158 DE-1	158 DE-1
P	P			TY4
0	0	1	1	1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
1 UNTREATED CHECK			0 b	0 b
2 PREFIX	2 pt/a A		100 a	100 a
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			
3 PREFIX	2 pt/a A		100 a	100 a
TRICOR DF	6 oz/a A			
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			
4 PREFIX	2 pt/a A		100 a	100 a
CANOPY	2.25 oz/a A			
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			
5 BOUNDARY	1.75 pt/a A		98 a	98 a
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			
6 BOUNDARY	1.75 pt/a A		100 a	100 a
CANOPY	2.25 oz/a A			
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			
7 BOUNDARY	1.75 pt/a A		100 a	100 a
XTENDIMAX	22 fl oz/a A			
AG13063	1 % v/v A			
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			
8 BROADAXE XC	25 fl oz/a A		100 a	100 a
TRICOR DF	6 oz/a A			
XTENDIMAX	22 fl oz/a B			
ROUNDUP POWERMAX	26 fl oz/a B			
AG13063	1 % v/v B			
INTACT	0.5 % v/v B			

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=1,2,4,6,16
 Could not calculate LSD (% mean diff) for columns 5,7,9 because error mean square = 0.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed			
Pest Code	AMBTR	AMBTR			
Pest Name	Giant ragweed	Giant ragweed			
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Aug-1-2017	Aug-18-2017	Nov-1-2017	Nov-1-2017	Nov-1-2017
Rating Type	CONTROL	CONTROL	YIELD	MOICON	YIELD
Rating Unit	%	%	LB	%	BU
Number of Subsamples	1	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	T. CAMPBELL	T. CAMPBELL	T. CAMPBELL
Rating Timing	A9	AA			
Days After First/Last Applic.	75 12	92 29	167 104	167 104	167 104
Trt-Eval Interval	22 DA-A	22 DA-A			
Days After Emergence	66 DE-1	83 DE-1	158 DE-1	158 DE-1	158 DE-1
ARM Action Codes	P	P			TY4
Number of Decimals	0	0	1	1	1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	13	14	15
9 SONIC	4.5 oz/a A		100 a	100 a	24.6 a
XTENDIMAX	22 fl oz/a B				13.4 a
ROUNDUP POWERMAX	26 fl oz/a B				71.1 a
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
10 ZIDUA PRO	6 fl oz/a A		100 a	100 a	25.1 a
XTENDIMAX	22 fl oz/a B				12.7 a
ROUNDUP POWERMAX	26 fl oz/a B				73.0 a
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
LSD P=.05	1.1	1.1	3.53	0.53	10.35
Standard Deviation	0.8	0.8	2.43	0.36	7.14
CV	0.87	0.87	10.63	2.81	10.74
Bartlett's X2	1.956	1.956	12.623	37.188	13.278
P(Bartlett's X2)	0.162	0.162	0.18	0.001*	0.15
Skewness	-2.7674*	-2.7674*	-2.341*	2.8238*	-2.3327*
Kurtosis	5.9638*	5.9638*	4.9292*	12.2011*	4.888*
Replicate F	1.789	1.789	0.604	0.265	0.611
Replicate Prob(F)	0.1730	0.1730	0.6179	0.8496	0.6137
Treatment F	6524.655	6524.655	28.544	1.649	28.041
Treatment Prob(F)	0.0001	0.0001	0.0001	0.1531	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=1,2,4,6,16
 Could not calculate LSD (% mean diff) for columns 5,7,9 because error mean square = 0.

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-SOY-09	Investigator: Dr. Bill Johnson	
Project ID: EHLSoy03-2017	Study Director: Dustin Johnson	
Sponsor Contact: C. Threewits - Syngenta		

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLOT = plot

Rating Type

PHYGEN = phytotoxicity - general / injury

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

LB = pound

BU = bushel

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

A6 = 6th Assessment according to Trial Schedule

A7 = 7th Assessment According to Trial Schedule

A8 = 8th Assessment According to Trial Schedule

A9 = 9th Assessment According to Trial Schedule

AA = 10th Assessment According to Trial Schedule

ARM Action Codes

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

TY4 = $2.904 * [15] * (100 - @MVAVGREP([16])) / 87$

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Pest Name	Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jun-2-2017	Jun-9-2017	Jun-9-2017	Jun-14-2017	Jun-14-2017
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	M. ZIMMER	D. JOHNSON	D. JOHNSON	M. ZIMMER	M. ZIMMER
Rating Timing	A1	A2	A2	A3	A3
Days After First/Last Applic.	15 15	22 22	22 22	27 27	27 27
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A
Days After Emergence	6 DE-1	13 DE-1	13 DE-1	18 DE-1	18 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	1	2	3
1 UNTREATED CHECK		101	0	0	0
		303	0	0	0
		601	0	0	0
		801	0	0	0
		Mean =	0	0	0
2 PREFIX	2 pt/a A	102	100	97	0
XTENDIMAX	22 fl oz/a B	301	100	95	3
ROUNDUP POWERMAX	26 fl oz/a B	504	100	98	0
AG13063	1 % v/v B	804	90	85	0
INTACT	0.5 % v/v B				
		Mean =	98	94	1
3 PREFIX	2 pt/a A	103	100	95	0
TRICOR DF	6 oz/a A	404	98	90	0
XTENDIMAX	22 fl oz/a B	605	98	95	0
ROUNDUP POWERMAX	26 fl oz/a B	704	95	90	0
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	98	93	0
4 PREFIX	2 pt/a A	104	90	85	0
CANOPY	2.25 oz/a A	304	88	80	0
XTENDIMAX	22 fl oz/a B	501	100	98	0
ROUNDUP POWERMAX	26 fl oz/a B	805	100	95	0
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	95	90	0
5 BOUNDARY	1.75 pt/a A	105	0	0	0
XTENDIMAX	22 fl oz/a B	405	0	0	0
ROUNDUP POWERMAX	26 fl oz/a B	503	6*	8*	0
AG13063	1 % v/v B	705	0	0	0
INTACT	0.5 % v/v B				
		Mean =	1	2	0
6 BOUNDARY	1.75 pt/a A	201	95	85	2
CANOPY	2.25 oz/a A	402	75	70	0
XTENDIMAX	22 fl oz/a B	602	80	80	0
ROUNDUP POWERMAX	26 fl oz/a B	803	80	75	0
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	83	78	1
7 BOUNDARY	1.75 pt/a A	202	98	95	0
XTENDIMAX	22 fl oz/a A	401	100	95	0
AG13063	1 % v/v A	604	98	90	5
XTENDIMAX	22 fl oz/a B	701	95	90	0
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	98	93	1

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-SOY-09 Investigator: Dr. Bill Johnson
 Project ID: EHLSoy03-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR		
Pest Name	Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-2-2017	Jun-9-2017	Jun-9-2017	Jun-14-2017	Jun-14-2017		
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	PHYGEN		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
Assessed By	M. ZIMMER	D. JOHNSON	D. JOHNSON	M. ZIMMER	M. ZIMMER		
Rating Timing	A1	A2	A2	A3	A3		
Days After First/Last Applic.	15 15	22 22	22 22	27 27	27 27		
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A		
Days After Emergence	6 DE-1	13 DE-1	13 DE-1	18 DE-1	18 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
8 BROADAXE XC	25 fl oz/a A	203	90	80	0	60	0
TRICOR DF	6 oz/a A	305	75	65	0	35	0
XTENDIMAX	22 fl oz/a B	603	95	80	0	60	0
ROUNDUP POWERMAX	26 fl oz/a B	702	90	85	0	65	0
AG13063	1 % v/v B						
INTACT	0.5 % v/v B						
	Mean =		88	78	0	55	0
9 SONIC	4.5 oz/a A	204	20	20	0	10	0
XTENDIMAX	22 fl oz/a B	302	93	75	0	60	0
ROUNDUP POWERMAX	26 fl oz/a B	505	93	95	2	65	0
AG13063	1 % v/v B	802	85	80	0	40	0
INTACT	0.5 % v/v B						
	Mean =		73	68	1	44	0
10 ZIDUA PRO	6 fl oz/a A	205	90	80	0	75	0
XTENDIMAX	22 fl oz/a B	403	98	90	0	90	0
ROUNDUP POWERMAX	26 fl oz/a B	502	100	95	5	95	0
AG13063	1 % v/v B	703	90	85	0	75	0
INTACT	0.5 % v/v B						
	Mean =		95	88	1	84	0

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-SOY-09 Investigator: Dr. Bill Johnson
 Project ID: EHLSoy03-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Pest Name	Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed	Giant ragweed
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jun-20-2017	Jun-20-2017	Jun-28-2017	Jun-28-2017	Jul-5-2017
Rating Type	CONTROL	PHYGEN	CONTROL	PHYGEN	CONTROL
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON
Rating Timing	A4	A4	A5	A5	A6
Days After First/Last Applic.	33 33	33 33	41 41	41 41	48 48
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A
Days After Emergence	24 DE-1	24 DE-1	32 DE-1	32 DE-1	39 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	6	7	8
1 UNTREATED CHECK		101	0	0	0
		303	0	0	0
		601	0	0	0
		801	0	0	0
		Mean =	0	0	0
2 PREFIX	2 pt/a A	102	88	0	90
XTENDIMAX	22 fl oz/a B	301	93	0	95
ROUNDUP POWERMAX	26 fl oz/a B	504	90	0	95
AG13063	1 % v/v B	804	80	0	95
INTACT	0.5 % v/v B				
		Mean =	88	0	94
3 PREFIX	2 pt/a A	103	90	0	95
TRICOR DF	6 oz/a A	404	88	0	90
XTENDIMAX	22 fl oz/a B	605	90	0	95
ROUNDUP POWERMAX	26 fl oz/a B	704	80	0	95
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	87	0	94
4 PREFIX	2 pt/a A	104	75	0	90
CANOPY	2.25 oz/a A	304	65	0	90
XTENDIMAX	22 fl oz/a B	501	90	0	95
ROUNDUP POWERMAX	26 fl oz/a B	805	85	0	90
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	79	0	91
5 BOUNDARY	1.75 pt/a A	105	0	0	80
XTENDIMAX	22 fl oz/a B	405	0	0	80
ROUNDUP POWERMAX	26 fl oz/a B	503	9*	0	85
AG13063	1 % v/v B	705	0	0	80
INTACT	0.5 % v/v B				
		Mean =	2	0	81
6 BOUNDARY	1.75 pt/a A	201	80	0	90
CANOPY	2.25 oz/a A	402	30	0	80
XTENDIMAX	22 fl oz/a B	602	65	0	88
ROUNDUP POWERMAX	26 fl oz/a B	803	60	0	85
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	59	0	86
7 BOUNDARY	1.75 pt/a A	202	90	0	95
XTENDIMAX	22 fl oz/a A	401	85	0	95
AG13063	1 % v/v A	604	80	0	95
XTENDIMAX	22 fl oz/a B	701	85	0	95
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	85	0	95

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

				W Weed AMBTR Giant ragweed	GLXMA Soybean	W Weed AMBTR Giant ragweed	GLXMA Soybean	W Weed AMBTR Giant ragweed	GLXMA Soybean	W Weed AMBTR Giant ragweed	GLXMA Soybean
Pest Type											
Pest Code											
Pest Name											
Crop Code											
Crop Name											
Part Rated											
Rating Date				Jun-20-2017	Jun-20-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017	Jul-5-2017	Jul-12-2017
Rating Type				CONTROL	PHYGEN	CONTROL	PHYGEN	CONTROL	PHYGEN	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%	%
Number of Subsamples				1	1	1	1	1	1	1	1
Assessed By				M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON	
Rating Timing				A4	A4	A5	A5	A5	A5	A6	A7
Days After First/Last Applic.				33 33	33 33	41 41	41 41	41 41	41 41	48 48	55 55
Trt-Eval Interval				22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A	22 DA-A
Days After Emergence				24 DE-1	24 DE-1	32 DE-1	32 DE-1	32 DE-1	32 DE-1	39 DE-1	46 DE-1
ARM Action Codes				P	P	P	P	P	P	P	P
Number of Decimals				0	0	0	0	0	0	0	0
Trt Treatment		Rate	Appl								
No. Name		Rate Unit	Code Plot	6	7	8	9	10	11		
8 BROADAXE XC		25 fl oz/a A	203	60	0	80	0	93	100		
TRICOR DF		6 oz/a A	305	15	0	80	0	85	90		
XTENDIMAX		22 fl oz/a B	603	65	0	88	0	95	97		
ROUNDUP POWERMAX		26 fl oz/a B	702	65	0	90	0	95	99		
AG13063		1 % v/v B									
INTACT		0.5 % v/v B									
			Mean =	51	0	85	0	92	97		
9 SONIC		4.5 oz/a A	204	10	0	80	0	88	92		
XTENDIMAX		22 fl oz/a B	302	55	0	85	0	93	100		
ROUNDUP POWERMAX		26 fl oz/a B	505	65	0	85	0	93	98		
AG13063		1 % v/v B	802	55	0	80	0	93	97		
INTACT		0.5 % v/v B									
			Mean =	46	0	83	0	92	97		
10 ZIDUA PRO		6 fl oz/a A	205	75	0	90	0	90	94		
XTENDIMAX		22 fl oz/a B	403	85	0	95	0	97	100		
ROUNDUP POWERMAX		26 fl oz/a B	502	90	0	95	0	98	100		
AG13063		1 % v/v B	703	75	0	90	0	95	99		
INTACT		0.5 % v/v B									
			Mean =	81	0	93	0	95	98		

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed		
Pest Code	AMBTR	AMBTR	AMBTR		
Pest Name	Giant ragweed	Giant ragweed	Giant ragweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-19-2017	Aug-1-2017	Aug-18-2017	Nov-1-2017	Nov-1-2017
Rating Type	CONTROL	CONTROL	CONTROL	YIELD	MOICON
Rating Unit	%	%	%	LB	%
Number of Subsamples	1	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	T. CAMPBELL	T. CAMPBELL
Rating Timing	A8	A9	AA		
Days After First/Last Applic.	62 62	75 12	92 29	167 104	167 104
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A		
Days After Emergence	53 DE-1	66 DE-1	83 DE-1	158 DE-1	158 DE-1
ARM Action Codes	P	P	P		
Number of Decimals	0	0	0	1	1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	12	13	14
1 UNTREATED CHECK		101	0	0	0
		303	0	0	0
		601	0	0	0
		801	0	0	0
		Mean =	0	0	0
2 PREFIX	2 pt/a A	102	100	100	100
XTENDIMAX	22 fl oz/a B	301	100	100	100
ROUNDUP POWERMAX	26 fl oz/a B	504	100	100	100
AG13063	1 % v/v B	804	100	100	100
INTACT	0.5 % v/v B				
		Mean =	100	100	100
3 PREFIX	2 pt/a A	103	100	100	100
TRICOR DF	6 oz/a A	404	100	100	100
XTENDIMAX	22 fl oz/a B	605	100	100	100
ROUNDUP POWERMAX	26 fl oz/a B	704	100	100	100
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	100	100	100
4 PREFIX	2 pt/a A	104	100	100	100
CANOPY	2.25 oz/a A	304	100	100	100
XTENDIMAX	22 fl oz/a B	501	100	100	100
ROUNDUP POWERMAX	26 fl oz/a B	805	100	100	100
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	100	100	100
5 BOUNDARY	1.75 pt/a A	105	98	100	100
XTENDIMAX	22 fl oz/a B	405	95	95	95
ROUNDUP POWERMAX	26 fl oz/a B	503	98	100	100
AG13063	1 % v/v B	705	98	98	98
INTACT	0.5 % v/v B				
		Mean =	97	98	98
6 BOUNDARY	1.75 pt/a A	201	100	100	100
CANOPY	2.25 oz/a A	402	98	100	100
XTENDIMAX	22 fl oz/a B	602	98	100	100
ROUNDUP POWERMAX	26 fl oz/a B	803	100	100	100
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	99	100	100
7 BOUNDARY	1.75 pt/a A	202	100	100	100
XTENDIMAX	22 fl oz/a A	401	100	100	100
AG13063	1 % v/v A	604	100	100	100
XTENDIMAX	22 fl oz/a B	701	100	100	100
ROUNDUP POWERMAX	26 fl oz/a B				
AG13063	1 % v/v B				
INTACT	0.5 % v/v B				
		Mean =	100	100	100

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09
 Protocol ID: 17S-TPAC-SOY-09
 Project ID: EHLSoy03-2017

Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed				
Pest Code	AMBTR	AMBTR	AMBTR				
Pest Name	Giant ragweed	Giant ragweed	Giant ragweed				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-19-2017	Aug-1-2017	Aug-18-2017	Nov-1-2017	Nov-1-2017		
Rating Type	CONTROL	CONTROL	CONTROL	YIELD	MOICON		
Rating Unit	%	%	%	LB	%		
Number of Subsamples	1	1	1	1	1		
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	T. CAMPBELL	T. CAMPBELL		
Rating Timing	A8	A9	AA				
Days After First/Last Applic.	62 62	75 12	92 29	167 104	167 104		
Trt-Eval Interval	22 DA-A	22 DA-A	22 DA-A				
Days After Emergence	53 DE-1	66 DE-1	83 DE-1	158 DE-1	158 DE-1		
ARM Action Codes	P	P	P				
Number of Decimals	0	0	0	1	1		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	12	13	14	15	16
8 BROADAXE XC	25 fl oz/a A	203	100	100	100	26.7	12.8
TRICOR DF	6 oz/a A	305	90	98	98	21.8	12.7
XTENDIMAX	22 fl oz/a B	603	97	100	100	24.6	12.8
ROUNDUP POWERMAX	26 fl oz/a B	702	100	100	100	24.5	12.8
AG13063	1 % v/v B						
INTACT	0.5 % v/v B						
		Mean =	97	100	100	24.4	12.8
9 SONIC	4.5 oz/a A	204	95	100	100	26.0	13.3
XTENDIMAX	22 fl oz/a B	302	100	100	100	24.2	13.1
ROUNDUP POWERMAX	26 fl oz/a B	505	98	100	100	25.0	12.7
AG13063	1 % v/v B	802	99	100	100	23.2	14.7
INTACT	0.5 % v/v B						
		Mean =	98	100	100	24.6	13.4
10 ZIDUA PRO	6 fl oz/a A	205	95	100	100	25.1	12.6
XTENDIMAX	22 fl oz/a B	403	100	100	100	25.0	12.7
ROUNDUP POWERMAX	26 fl oz/a B	502	100	100	100	25.6	13.2
AG13063	1 % v/v B	703	99	100	100	24.6	12.5
INTACT	0.5 % v/v B						
		Mean =	99	100	100	25.1	12.7

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-SOY-09 Investigator: Dr. Bill Johnson
 Project ID: EHLSoy03-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type				
Pest Code				
Pest Name				
Crop Code			GLXMA	
Crop Name			Soybean	
Part Rated			PLOT -	
Rating Date			Nov-1-2017	
Rating Type			YIELD	
Rating Unit			BU	
Number of Subsamples			1	
Assessed By			T. CAMPBELL	
Rating Timing				
Days After First/Last Applic.			167 104	
Trt-Eval Interval				
Days After Emergence			158 DE-1	
ARM Action Codes			TY4	
Number of Decimals			1	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code Plot		17
1 UNTREATED CHECK		101		0.7
		303		16.6
		601		21.0
		801		15.1
		Mean =		13.3
2 PREFIX	2 pt/a	A	102	70.7
XTENDIMAX	22 fl oz/a	B	301	58.4
ROUNDUP POWERMAX	26 fl oz/a	B	504	82.0
AG13063	1 % v/v	B	804	77.9
INTACT	0.5 % v/v	B		
		Mean =		72.2
3 PREFIX	2 pt/a	A	103	78.5
TRICOR DF	6 oz/a	A	404	87.0
XTENDIMAX	22 fl oz/a	B	605	73.1
ROUNDUP POWERMAX	26 fl oz/a	B	704	79.7
AG13063	1 % v/v	B		
INTACT	0.5 % v/v	B		
		Mean =		79.6
4 PREFIX	2 pt/a	A	104	73.5
CANOPY	2.25 oz/a	A	304	78.8
XTENDIMAX	22 fl oz/a	B	501	68.0
ROUNDUP POWERMAX	26 fl oz/a	B	805	71.3
AG13063	1 % v/v	B		
INTACT	0.5 % v/v	B		
		Mean =		72.9
5 BOUNDARY	1.75 pt/a	A	105	63.7
XTENDIMAX	22 fl oz/a	B	405	66.2
ROUNDUP POWERMAX	26 fl oz/a	B	503	75.3
AG13063	1 % v/v	B	705	70.4
INTACT	0.5 % v/v	B		
		Mean =		68.9
6 BOUNDARY	1.75 pt/a	A	201	55.7
CANOPY	2.25 oz/a	A	402	75.2
XTENDIMAX	22 fl oz/a	B	602	70.2
ROUNDUP POWERMAX	26 fl oz/a	B	803	77.6
AG13063	1 % v/v	B		
INTACT	0.5 % v/v	B		
		Mean =		69.7
7 BOUNDARY	1.75 pt/a	A	202	78.9
XTENDIMAX	22 fl oz/a	A	401	68.7
AG13063	1 % v/v	A	604	81.0
XTENDIMAX	22 fl oz/a	B	701	62.3
ROUNDUP POWERMAX	26 fl oz/a	B		
AG13063	1 % v/v	B		
INTACT	0.5 % v/v	B		
		Mean =		72.7

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-SOY-09	Investigator: Dr. Bill Johnson	
Project ID: EHLSoy03-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type			
Pest Code			
Pest Name			
Crop Code		GLXMA	
Crop Name		Soybean	
Part Rated		PLOT -	
Rating Date		Nov-1-2017	
Rating Type		YIELD	
Rating Unit		BU	
Number of Subsamples		1	
Assessed By		T. CAMPBELL	
Rating Timing			
Days After First/Last Applic.		167 104	
Trt-Eval Interval			
Days After Emergence		158 DE-1	
ARM Action Codes		TY4	
Number of Decimals		1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code Plot	17
8 BROADAXE XC	25 fl oz/a	A 203	77.8
TRICOR DF	6 oz/a	A 305	63.4
XTENDIMAX	22 fl oz/a	B 603	71.5
ROUNDUP POWERMAX	26 fl oz/a	B 702	71.2
AG13063	1 % v/v	B	
INTACT	0.5 % v/v	B	
		Mean =	71.0
9 SONIC	4.5 oz/a	A 204	75.3
XTENDIMAX	22 fl oz/a	B 302	70.4
ROUNDUP POWERMAX	26 fl oz/a	B 505	73.0
AG13063	1 % v/v	B 802	65.9
INTACT	0.5 % v/v	B	
		Mean =	71.1
10 ZIDUA PRO	6 fl oz/a	A 205	73.3
XTENDIMAX	22 fl oz/a	B 403	72.8
ROUNDUP POWERMAX	26 fl oz/a	B 502	74.2
AG13063	1 % v/v	B 703	71.9
INTACT	0.5 % v/v	B	
		Mean =	73.0

Purdue Weed Science

Herbicide Pre Options and Tank Mixes in Xtend Soybeans

Trial ID: 17S-TPAC-SOY-09	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-SOY-09	Investigator: Dr. Bill Johnson	
Project ID: EHLSoy03-2017	Study Director: Dustin Johnson	
Sponsor Contact: C. Threewits - Syngenta		

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

Crop Code

GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLOT = plot

Rating Type

PHYGEN = phytotoxicity - general / injury

YIELD = yield

MOICON = moisture content

Rating Unit

% = percent

LB = pound

BU = bushel

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

A6 = 6th Assessment according to Trial Schedule

A7 = 7th Assessment According to Trial Schedule

A8 = 8th Assessment According to Trial Schedule

A9 = 9th Assessment According to Trial Schedule

AA = 10th Assessment According to Trial Schedule

ARM Action Codes

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

TY4 = $2.904 * [15] * (100 - @MVAVGREP([16])) / 87$