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Kixor - Get the Most Out of Every Soybean Acre.

Trial ID: 11S-THP-CTS-33 Protocol ID: 11S-THP-CTS-203
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: DEM-H-2011-US-D9F-G-01.0 Investigator: Dr. Bill Johnson
 Sponsor Contact: BASF- Gery Welker

General Trial Information

Study Director: White/Marquardt **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: Established
Initiation Date: 4-8-2011

Trial Location

City: Lafayette
State/Prov.: IN
Postal Code: 47909
Country: USA

Personnel

Study Director: White/Marquardt **Title:** Research Associate

Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA

Postal Code: 47907 **E-mail:** mdwhite@purdue.edu
Phone No.: 765-494-0891

Investigator: Dr. Bill Johnson **Title:** Professor

Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA

Postal Code: 47907 **E-mail:** wji@purdue.edu
Phone No.: 765-494-4656 **Mobile No.:** 765-404-9801

Cooperator/Landowner

Cooperator: Throckmorton Purdue Ag Center **Role:** Purdue Ag Center

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 **E-mail:** jayyoung@purdue.edu
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG2931 **Description:** RR2
BBCH Scale: BSOY **Planting Date:** 5-18-2011
Planting Method: PLANTD planted **Rate, Unit:** 124000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Soil Moisture: DRY dry **Soil Temperature, Unit:** 64 F
Emergence Date: 5-25-2011

Pest Description

Pest 1 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf

Pest 2 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 3 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 4 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 5 Type: W **Code:** SOLPT *Solanum ptycanthum*
Common Name: Eastern black nightshade

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Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 60 FT	Experimental Unit: 1 PLOT plot
Plot Area, Unit: 600 FT ²	Tillage Type: CONTIL conventional-till
Replications: 6	Study Design: RACOB Randomized Complete Block (RCB)
	Untreated Arrangement: INCLUDED single control randomized in each block

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

Application Description			
	A	B	C
Application Date:	5-18-2011	6-13-2011	7-12-2011
Time of Day:	3:15-3:45	2:45-3:05	8:20 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	ATPLAN	MIPOWE	
Application Placement:	SOIL	FOLIAR	FOLIAR
Applied By:	MW	BM	MW
Air Temperature, Unit:	63.5 F	77.5 F	77 F
% Relative Humidity:	56	56	82
Wind Velocity, Unit:	1.8 MPH	3.7 MPH	1.5 MPH
Wind Direction:	WEST	W	SE
Dew Presence (Y/N):	N no	N no	Y yes
Soil Temperature, Unit:	64 F	80 F	80 F
Soil Moisture:	DRY	DRY	SLIWET
% Cloud Cover:	95	10	0

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		V2	R3
Height, Unit:		6 IN	

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Height, Unit:		2.5 IN	
Height Minimum, Maximum:		1 4	
Density, Unit:		7 YD2	
Pest 2 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Height, Unit:		3 IN	
Height Minimum, Maximum:		1 5	
Density, Unit:		30 YD2	
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Height, Unit:		3 IN	
Height Minimum, Maximum:		2 4	
Density, Unit:		4 YD2	
Pest 4 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Height, Unit:		5 IN	
Density, Unit:		5 YD2	
Pest 5 Code, Type, Scale:	SOLPT W	SOLPT W	SOLPT W
Height, Unit:		2 IN	
Height Minimum, Maximum:		1 3	
Density, Unit:		15 YD2	

Application Equipment

	A	B	C
Appl. Equipment:	CO2 FORD	CUB	CUB
Equipment Type:	SPTRMO		
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	XR 100 02	XR 110 02	XR 110 02
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	6	6	6
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	19 IN	19 IN
Ground Speed, Unit:	2.1 MPH	2.1 MPH	2.1 MPH
Carrier:	MEIGS	MEIGS	MEIGS
Spray Volume, Unit:	20 gal/ac	20	20
Mix Size, Unit:	2.5 liters		
Propellant:	CO2		

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Project ID: DEM-H-2011-US-D9F-G-01.0	Investigator: Dr. Bill Johnson
Sponsor Contact: BASF- Gery Welker	

Pest Type	W Weed SETFA	W Weed AMBTR	W Weed ABUTH	W Weed AMARE	W Weed CHEAL	W Weed SETFA	W Weed AMBTR		
Pest Code	Setaria faberi	Ambrosia trifida	Abutilon theophrasti	Amaranthus retrofractus	Chenopodium album	Setaria faberi	Ambrosia trifida		
Pest Scientific Name	Giant foxtail	Giant ragweed	Velvetleaf	Redroot pigweed	Common lambsquarters	Giant foxtail	Giant ragweed		
Pest Name	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
Crop Code	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
BBCH Scale	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Scientific Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Name Description	6-13-2011	6-13-2011	6-13-2011	6-13-2011	6-13-2011	7-5-2011	7-5-2011		
Rating Date	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Type	% ₁	% ₁	% ₁	% ₁	% ₁	% ₁	% ₁		
Rating Unit	V2	V2	V2	V2	V2	V2	V2		
Number of Subsamples	4 IN	4 IN	1.5 IN	1 IN	1.5 IN	24 IN	36 IN		
Crop Stage Majority	20 YD2	2 YD2	1 YD2	1 YD2	2 YD2	50 YD2	6 YD2		
Pest Stage Majority	26 26	26 26	26 26	26 26	26 26	48 22	48 22		
Pest Density, Unit Assessed By	26 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1	48 DP-1	48 DP-1		
Days After First/Last Applic.	19 DE-1	19 DE-1	19 DE-1	19 DE-1	19 DE-1	41 DE-1	41 DE-1		
Plant-Eval Interval									
Days After Emergence									
Trt Treatment No. Name	Rate Rate Unit	Appl Code	1	2	3	4	5	6	7
1 Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	95.3 a	88.3 a
NIS	0.25 % v/v	B							
AMS - Liquid	17 lb ai/100 gal	B							
2 Optil (68 WG)	0.085 lb ai/a	A	88.3 a	43.3 a	99.0 a	87.5 a	99.0 a	94.8 a	94.3 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B							
NIS	0.25 % v/v	B							
AMS - Liquid	17 lb ai/100 gal	B							
3 Optil (68 WG)	0.085 lb ai/a	A	80.8 a	40.0 a	99.0 a	95.2 a	98.3 a	96.7 a	90.7 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B							
NIS	0.25 % v/v	B							
AMS - Liquid	17 lb ai/100 gal	B							
Priaxor (SC)	0.13 lb ai/a	C							
NIS	0.25 % v/v	C							
4 Optil (68 WG)	0.085 lb ai/a	A	82.5 a	43.3 a	99.0 a	95.2 a	99.0 a	95.2 a	87.0 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B							
NIS	0.25 % v/v	B							
AMS - Liquid	17 lb ai/100 gal	B							
Priaxor (SC)	0.13 lb ai/a	C							
Fastac (100 g/l EC)	0.026 lb ai/a	C							
NIS	0.25 % v/v	C							
LSD (P=.05)	10.64		23.42	0.00	7.85	1.00	2.52	8.25	
Standard Deviation	8.64		19.03	0.00	6.38	0.82	2.05	6.70	
CV	13.74		60.1	0.0	9.18	1.1	2.14	7.44	
Bartlett's X2	1.389		0.048	0.0	0.606	0.0	7.571	2.733	
P(Bartlett's X2)	0.499		0.976	.	0.739	.	0.056	0.435	
Replicate F	0.993		4.436	0.000	1.252	1.000	1.408	0.667	
Replicate Prob(F)	0.4548		0.0111	1.0000	0.3344	0.4509	0.2770	0.6545	
Treatment F	142.100		7.423	0.000	318.046	21954.252	0.928	1.378	
Treatment Prob(F)	0.0001		0.0028	1.0000	0.0001	0.0001	0.4512	0.2877	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	CHEAL	ABUTH	IPOHE	SETFA	AMBTR		
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Abutilon theop>	Ipomoea heder>	Setaria faberi	Ambrosia trifi>		
Pest Name	Redroot pigweed	Common lambsqu>	Velvetleaf	Ivyleaf mornin>	Giant foxtail	Giant ragweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Description					R5	R5		
Rating Date	7-5-2011	7-5-2011	7-5-2011	7-5-2011	8-11-2011	8-11-2011		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority					R5	R5		
Pest Stage Majority	20 IN	30 IN	24 IN	10 IN	40 IN	8 FT		
Pest Density, Unit	20 YD2	10 YD2	3 YD2	2 YD2	40 YD2	6 YD2		
Assessed By					MW	MW		
Days After First/Last Applic.	48 22	48 22	48 22	48 22	85 30	85 30		
Plant-Eval Interval	48 DP-1	48 DP-1	48 DP-1	48 DP-1	85 DP-1	85 DP-1		
Days After Emergence	41 DE-1	41 DE-1	41 DE-1	41 DE-1	78 DE-1	78 DE-1		
Trt Treatment	Rate	Appl	8	9	10	11	12	13
No. Name	Rate Unit	Code						
1 Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B	89.2 b	83.3 b	99.0 a	93.3 a	99.0 a	93.2 a
NIS	0.25 % v/v	B						
AMS - Liquid	17 lb ai/100 gal	B						
2 Optil (68 WG)	0.085 lb ai/a	A	97.7 a	99.0 a	99.0 a	94.2 a	99.0 a	94.5 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B						
NIS	0.25 % v/v	B						
AMS - Liquid	17 lb ai/100 gal	B						
3 Optil (68 WG)	0.085 lb ai/a	A	97.7 a	99.0 a	99.0 a	93.7 a	99.0 a	90.7 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B						
NIS	0.25 % v/v	B						
AMS - Liquid	17 lb ai/100 gal	B						
Priaxor (SC)	0.13 lb ai/a	C						
NIS	0.25 % v/v	C						
4 Optil (68 WG)	0.085 lb ai/a	A	96.8 a	99.0 a	99.0 a	98.7 a	99.0 a	88.7 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B						
NIS	0.25 % v/v	B						
AMS - Liquid	17 lb ai/100 gal	B						
Priaxor (SC)	0.13 lb ai/a	C						
Fastac (100 g/l EC)	0.026 lb ai/a	C						
NIS	0.25 % v/v	C						
LSD (P=.05)			2.61	2.51	0.00	13.19	0.00	6.80
Standard Deviation			2.12	2.04	0.00	10.72	0.00	5.53
CV			2.23	2.15	0.0	11.29	0.0	6.02
Bartlett's X2			2.858	0.0	0.0	21.081	0.0	9.404
P(Bartlett's X2)			0.414	.	.	0.001*	.	0.024*
Replicate F			2.881	1.000	0.000	0.403	0.000	1.683
Replicate Prob(F)			0.0511	0.4509	1.0000	0.8389	1.0000	0.1992
Treatment F			22.741	88.360	0.000	0.325	0.000	1.326
Treatment Prob(F)			0.0001	0.0001	1.0000	0.8070	1.0000	0.3029

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Pest Type	W Weed	W Weed	W Weed	
Pest Code	CHEAL	AMARE	AMATA	
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Amaranthus tam>	
Pest Name	Common lambsqu>	Redroot pigweed	Common waterhe>	
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Description	R5	R5	R5	
Rating Date	8-11-2011	8-11-2011	8-11-2011	10-10-2011
Rating Type	CONTRO	CONTRO	CONTRO	YIELD
Rating Unit	%	%	%	bu/ac
Number of Subsamples	1	1	1	1
Crop Stage Majority	R5	R5	R5	
Pest Stage Majority	46 IN	45 IN	40 IN	
Pest Density, Unit	8 YD2	3 YD2	3 YD2	
Assessed By	MW	MW	MW	
Days After First/Last Applic.	85 30	85 30	85 30	145 90
Plant-Eval Interval	85 DP-1	85 DP-1	85 DP-1	145 DP-1
Days After Emergence	78 DE-1	78 DE-1	78 DE-1	138 DE-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	14	15
1 Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B	99.0 a	99.0 a
NIS	0.25 % v/v	B		96.7 a
AMS - Liquid	17 lb ai/100 gal	B		53.57 a
2 Optil (68 WG)	0.085 lb ai/a	A	99.0 a	99.0 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B		99.0 a
NIS	0.25 % v/v	B		54.95 a
AMS - Liquid	17 lb ai/100 gal	B		
3 Optil (68 WG)	0.085 lb ai/a	A	99.0 a	99.0 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B		99.0 a
NIS	0.25 % v/v	B		53.72 a
AMS - Liquid	17 lb ai/100 gal	B		
Priaxor (SC)	0.13 lb ai/a	C		
NIS	0.25 % v/v	C		
4 Optil (68 WG)	0.085 lb ai/a	A	99.0 a	99.0 a
Roundup WeatherMax 4.5 SL	0.77 lb ae/a	B		99.0 a
NIS	0.25 % v/v	B		50.13 a
AMS - Liquid	17 lb ai/100 gal	B		
Priaxor (SC)	0.13 lb ai/a	C		
Fastac (100 g/l EC)	0.026 lb ai/a	C		
NIS	0.25 % v/v	C		
LSD (P=.05)	0.00	0.00	3.52	4.472
Standard Deviation	0.00	0.00	2.86	3.635
CV	0.0	0.0	2.9	6.85
Bartlett's X2	0.0	0.0	0.0	0.606
P(Bartlett's X2)	.	.	.	0.895
Replicate F	0.000	0.000	1.000	13.316
Replicate Prob(F)	1.0000	1.0000	0.4509	0.0001
Treatment F	0.000	0.000	1.000	1.941
Treatment Prob(F)	1.0000	1.0000	0.4199	0.1664

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Protocol ID: 11S-THP-CTS-203

Location: Throckmorton

Study Director: White/Marquardt

Project ID: DEM-H-2011-US-D9F-G-01.0

Investigator: Dr. Bill Johnson

Sponsor Contact: BASF- Gery Welker

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US

AMBTR, Ambrosia trifida, = US

ABUTH, Abutilon theophrasti, = US

AMARE, Amaranthus retroflexus, = US

CHEAL, Chenopodium album, = US

IPOHE, Ipomoea hederacea, = US

AMATA, Amaranthus tamariscinus, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

YD2 = per square yard

Plant-Eval Interval

26 DP-1 = 1 GLXMA 5-18-2011

48 DP-1 = 1 GLXMA 5-18-2011

85 DP-1 = 1 GLXMA 5-18-2011

145 DP-1 = 1 GLXMA 5-18-2011