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Wisconsin GRW

Trial ID: 12S-THP-CTS-48 Protocol ID: 12S-THP-CTS-48
 Location: Throckmorton Study Director:
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact:

General Trial Information

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

Discipline: H herbicide
Trial Status: E established
Initiation Date: 5-4-2012

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:** wgj@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
State/Prov: IN
Postal Code: 47909 **E-mail:** jayyoung@purdue.edu
Country: USA United States
Phone No.: 765-538-3422
Fax No.: 765-538-3423

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG2931 **Description:** RR2
BBCH Scale: BSOY **Planting Date:** 5-14-2012
Planting Method: PLANTD planted **Rate, Unit:** 124000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Soil Moisture: DRY dry **Soil Temperature, Unit:** 68 F
Emergence Date: 5-22-2012

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
Pest 2 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Pest 3 Type: W **Code:** IPOHE Ipomoea hederacea
Common Name: Ivy leaf morningglory

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Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT²
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
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
pH: 6
CEC: 11.1

Texture: SIL silt loam
Soil Name: Toronto-Millbrook

Application Description

	A	B	C	D	E	F	G
Application Date:	5-15-2012	6-7-2012	6-14-2012	6-20-2012	6-20-2012	6-27-2012	7-5-2012
Time of Day:	10 AM	8:15 AM		7 AM	7 AM	8 AM	7:45 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	ATPLAN	EAPOWE	A+7DAYS	A=14DAYS	LAPOWE	E+7DAYS	E+14DAYS
Application Placement:	SOIL	SOIL	FOLIAR	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Applied By:	MW	MW	MW	MW	MW	BM	GT
Air Temperature, Unit:	85 F	68 F	56 F	79 F	79 F	84 F	89 F
% Relative Humidity:	40	61	65	63	63	42	65
Wind Velocity, Unit:	4 MPH	2.5 MPH	6 MPH	4 MPH	4 MPH	6.5 MPH	2 MPH
Wind Direction:	W	N	NE	S	S	S	SW
Dew Presence (Y/N):	N no	N no	N no	N no	N no	N no	N no
Soil Temperature, Unit:	68 F	69 F		78 F	78 F	79 F	88 F
Soil Moisture:	DRY	DRY	DRY	DRY	DRY	DRY	DRY
% Cloud Cover:	0	0	0	0	0	0	0

Crop Stage At Each Application

	A	B	C	D	E	F	G
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH	BBCH	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:		V3	V4	V6	V6	V7	V10
Height, Unit:				20 IN	20 IN	14 IN	26 IN

Pest Stage At Each Application

	A	B	C	D	E	F	G
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Height Minimum, Maximum:		1.5 6	2 11		4 16	2 5	0.5 1
Density, Unit:		11 YD2	10 YD2		8 YD2	2 YD2	8 YD2
Pest 2 Code, Type, Scale:	SETFA W	SETFA W	SETFA W	SETFA W	SETFA W	SETFA W	SETFA W
Height, Unit:							2 IN
Height Minimum, Maximum:		2.5 4	4 7		3 10	0.5 4	
Density, Unit:		8 YD2	15 YD2		8 YD2	7 YD2	3 YD2
Pest 3 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W	IPOHE W	IPOHE W	IPOHE W	IPOHE W
Height, Unit:						0.5 IN	
Height Minimum, Maximum:							0.5 4
Density, Unit:						8 YD2	12 YD2

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Application Equipment							
	A	B	C	D	E	F	G
Appl. Equipment:	CO2 FORD	CO2 FORD	CO2 FORD	CO2 FORD	CO2 FORD	DOWTIP BKPK	CO2 BKPK
Equipment Type:	SPTRMO	SPTRMO	SPTRMO	SPTRMO	SPTRMO	SPRBAC	SPRBAC
Operation Pressure, Unit:						17 PSI	17 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN	AIXR	FLAT FAN
Nozzle Size:	XR 100 02	XR 100 02	XR 100 02	XR 100 02	XR 100 02	110 02 VP	XR 110 02
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN	20 IN	15 IN	15 IN
Nozzles/Row:	6	6	6	6	6	8	8
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT	10 FT	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN	20 IN	20 IN	20 IN	18 IN	18 IN
Ground Speed, Unit:	2.1 MPH	2.1 MPH	2.1 MPH	2.1 MPH	2.1 MPH	3 MPH	3 MPH
Carrier:	MEIGS	MEIGS	MEIGS	MEIGS	MEIGS	MEIGS	H2O
Water Hardness (ppm CaCO3):						150	150
Spray Volume, Unit:	20 gal/ac	20 gal/ac	20 gal/ac	20 gal/ac	20 gal/ac	15 gal/ac	15 gal/ac
Mix Size, Unit:	2.5 liters	2.5 liters	2.5 liters	2.5 liters	2.5 liters	1.8 liters	1.8 liters
Propellant:	CO2	CO2	CO2	CO2	CO2	CO2	CO2
Tank Mix (Y/N):						N no	N no

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 Project ID: Investigator: Dr. Bill Johnson
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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBTR	SETFA	AMARE	CHEAL	SETFA	AMBTR	AMARE				
Pest Scientific Name	Ambrosia trifida	Setaria faberii	Amaranthus retrofractus	Chenopodium album	Setaria faberii	Ambrosia trifida	Amaranthus retrofractus				
Pest Name	Giant ragweed	Giant foxtail	Redroot pigweed	Common lambsquarters	Giant foxtail	Giant ragweed	Redroot pigweed				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA				
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean				
Rating Date	6-20-2012	6-20-2012	6-20-2012	6-20-2012	7-24-2012	7-24-2012	7-24-2012				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Scale	V6	V6	V6	V6							
Pest Stage Majority					36 IN	48 IN	36 IN				
Pest Density, Unit					15 FT2	5 YD2	10 YD2				
Assessed By	MW	MW	MW	MW	MW	MW	MW				
Days After First/Last Applic.	36 6	36 6	36 6	36 6	70 19	70 19	70 19				
Plant-Eval Interval	37 DP-1	37 DP-1	37 DP-1	37 DP-1	71 DP-1	71 DP-1	71 DP-1				
Days After Emergence	29 DE-1	29 DE-1	29 DE-1	29 DE-1	63 DE-1	63 DE-1	63 DE-1				
Trt	Treatment	Rate	Unit	Appl							
No.	Name	Rate	Unit	Code	1	2	3	4	5	6	7
1	Prefix (5.29 EC)	1.32 lb ai/a	A		91.0 ab	98.0 a	99.0 a	96.8 a	97.0 a	92.8 a	96.3 a
	Roundup PowerMax 4.5 SL	0.56 lb ae/a	B								
	AMS - Liquid	17 lb ai/100 gal	B								
2	Roundup PowerMax 4.5 SL	0.56 lb ae/a	B		86.3 b	98.0 a	99.0 a	99.0 a	86.3 c	90.8 a	83.8 cd
	AMS - Liquid	17 lb ai/100 gal	B								
3	Roundup PowerMax 4.5 SL	1.5 lb ae/a	B		96.0 ab	99.0 a	99.0 a	99.0 a	90.0 abc	93.3 a	86.3 bcd
	AMS - Liquid	17 lb ai/100 gal	B								
4	Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	B		97.0 a	98.5 a	99.0 a	99.0 a	92.5 abc	98.5 a	96.3 a
	COC	1 % v/v	B								
	AMS - Liquid	17 lb ai/100 gal	B								
5	Roundup PowerMax 4.5 SL	0.56 lb ae/a	B		92.8 ab	99.0 a	98.5 a	98.0 a	90.0 abc	93.3 a	90.0 abc
	Cobra	0.195 lb ai/a	B								
	COC	1 % v/v	B								
	AMS - Liquid	17 lb ai/100 gal	B								
6	Roundup PowerMax 4.5 SL	0.56 lb ae/a	B		96.3 ab	99.0 a	98.0 a	98.5 a	96.0 ab	99.0 a	96.8 a
	AMS - Liquid	17 lb ai/100 gal	B								
	Flexstar (1.88 L)	0.305 lb ai/a	C								
	COC	1 % v/v	C								
	AMS - Liquid	8.5 lb ai/100 gal	C								
7	Roundup PowerMax 4.5 SL	0.56 lb ae/a	B		95.5 ab	94.5 a	99.0 a	90.8 a	94.8 ab	98.0 a	99.0 a
	AMS - Liquid	17 lb ai/100 gal	B								
	Flexstar (1.88 L)	0.305 lb ai/a	D								
	COC	1 % v/v	D								
	AMS - Liquid	8.5 lb ai/100 gal	D								
8	Roundup PowerMax 4.5 SL	0.56 lb ae/a	B		94.5 ab	89.3 a	99.0 a	91.8 a	93.3 abc	97.0 a	95.7 a
	AMS - Liquid	17 lb ai/100 gal	B								
	Cobra	0.195 lb ai/a	C								
	NIS	0.25 % v/v	C								
	AMS - Liquid	4 lb ai/a	C								

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	W Weed		
Pest Code	AMBTR	SETFA	AMARE	CHEAL	SETFA	AMBTR	AMARE		
Pest Scientific Name	Ambrosia trif>	Setaria faberi	Amaranthus ret>	Chenopodium al>	Setaria faberi	Ambrosia trif>	Amaranthus ret>		
Pest Name	Giant ragweed	Giant foxtail	Redroot pigweed	Common lambsqu>	Giant foxtail	Giant ragweed	Redroot pigweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	6-20-2012	6-20-2012	6-20-2012	6-20-2012	7-24-2012	7-24-2012	7-24-2012		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Scale	V6	V6	V6	V6					
Pest Stage Majority					36 IN	48 IN	36 IN		
Pest Density, Unit					15 FT2	5 YD2	10 YD2		
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Days After First/Last Applic.	36 6	36 6	36 6	36 6	70 19	70 19	70 19		
Plant-Eval Interval	37 DP-1	37 DP-1	37 DP-1	37 DP-1	71 DP-1	71 DP-1	71 DP-1		
Days After Emergence	29 DE-1	29 DE-1	29 DE-1	29 DE-1	63 DE-1	63 DE-1	63 DE-1		
Trt Treatment	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit	Unit	Unit		
	1	2	3	4	5	6	7		
9 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	97.0 a	93.8 a	91.8 a	99.0 a	90.5 abc	99.0 a	94.8 a
AMS - Liquid	17 lb ai/100 gal	B							
Cobra	0.195 lb ai/a	D							
NIS	0.25 % v/v	D							
AMS - Liquid	4 lb ai/a	D							
10 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	B	94.0 ab	99.0 a	99.0 a	96.8 a	93.0 abc	99.0 a	95.5 a
COC	1 % v/v	B							
AMS - Liquid	17 lb ai/100 gal	B							
Cobra	0.125 lb ai/a	D							
NIS	0.25 % v/v	D							
AMS - Liquid	4 lb ai/a	D							
11 Prefix (5.29 EC)	1.32 lb ai/a	A	0.0 c	0.0 b	0.0 b	49.5 ab	97.0 a	94.8 a	98.5 a
Roundup PowerMax 4.5 SL	0.56 lb ae/a	E							
AMS - Liquid	17 lb ai/100 gal	E							
12 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	0.0 c	0.0 b	0.0 b	49.5 ab	91.3 abc	92.3 a	82.5 d
AMS - Liquid	17 lb ai/100 gal	E							
13 Roundup PowerMax 4.5 SL	1.5 lb ae/a	E	0.0 c	0.0 b	0.0 b	49.5 ab	87.5 bc	96.8 a	87.5 bcd
AMS - Liquid	17 lb ai/100 gal	E							
14 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	E	0.0 c	0.0 b	24.8 b	24.8 ab	91.3 abc	90.8 a	95.8 a
COC	1 % v/v	E							
AMS - Liquid	17 lb ai/100 gal	E							
15 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	0.0 c	0.0 b	0.0 b	24.8 ab	92.5 abc	87.3 a	91.8 ab
Cobra	0.195 lb ai/a	E							
COC	1 % v/v	E							
AMS - Liquid	17 lb ai/100 gal	E							
16 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	0.0 c	0.0 b	0.0 b	0.0 b	98.0 a	96.8 a	99.0 a
AMS - Liquid	17 lb ai/100 gal	E							
Flexstar (1.88 L)	0.305 lb ai/a	F							
COC	1 % v/v	F							
AMS - Liquid	8.5 lb ai/100 gal	F							
17 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	0.0 c	0.0 b	24.8 b	0.0 b	96.0 ab	96.8 a	98.0 a
AMS - Liquid	17 lb ai/100 gal	E							
Flexstar (1.88 L)	0.305 lb ai/a	G							
COC	1 % v/v	G							
AMS - Liquid	8.5 lb ai/100 gal	G							
18 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	0.0 c	0.0 b	24.8 b	0.0 b	93.6 abc	95.5 a	99.0 a
AMS - Liquid	17 lb ai/100 gal	E							
Cobra	0.195 lb ai/a	F							
NIS	0.25 % v/v	F							
AMS - Liquid	4 lb ai/a	F							

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	SETFA	AMARE	CHEAL	SETFA	AMBTR	AMARE		
Pest Scientific Name	Ambrosia trif>	Setaria faberi	Amaranthus ret>	Chenopodium al>	Setaria faberi	Ambrosia trif>	Amaranthus ret>		
Pest Name	Giant ragweed	Giant foxtail	Redroot pigweed	Common lambsqu>	Giant foxtail	Giant ragweed	Redroot pigweed		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	6-20-2012	6-20-2012	6-20-2012	6-20-2012	7-24-2012	7-24-2012	7-24-2012		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Scale	V6	V6	V6	V6					
Pest Stage Majority					36 IN	48 IN	36 IN		
Pest Density, Unit					15 FT2	5 YD2	10 YD2		
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Days After First/Last Applic.	36 6	36 6	36 6	36 6	70 19	70 19	70 19		
Plant-Eval Interval	37 DP-1	37 DP-1	37 DP-1	37 DP-1	71 DP-1	71 DP-1	71 DP-1		
Days After Emergence	29 DE-1	29 DE-1	29 DE-1	29 DE-1	63 DE-1	63 DE-1	63 DE-1		
Trt Treatment	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit	Unit	Unit		
	1	2	3	4	5	6	7		
19 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	0.0 c	0.0 b	0.0 b	24.8 ab	94.3 abc	95.8 a	97.0 a
AMS - Liquid	17 lb ai/100 gal	E							
Cobra	0.195 lb ai/a	G							
NIS	0.25 % v/v	G							
AMS - Liquid	4 lb ai/a	G							
20 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	E	0.0 c	0.0 b	24.8 b	24.8 ab	96.0 ab	93.5 a	99.0 a
COC	1 % v/v	E							
AMS - Liquid	17 lb ai/100 gal	E							
Cobra	0.125 lb ai/a	G							
NIS	0.25 % v/v	G							
AMS - Liquid	4 lb ai/a	G							
LSD (P=.05)	6.36	7.31	30.71	42.44	4.74	7.72	5.06		
Standard Deviation	4.49	5.17	21.71	30.01	3.35	5.46	3.58		
CV	9.56	10.68	40.2	49.36	3.61	5.74	3.8		
Bartlett's X2	20.272	28.523	37.315	61.358	33.537	22.715	16.258		
P(Bartlett's X2)	0.016*	0.001*	0.001*	0.001*	0.014*	0.122	0.365		
Replicate F	1.167	0.393	2.245	3.265	6.905	4.816	0.453		
Replicate Prob(F)	0.3303	0.7583	0.0928	0.0278	0.0005	0.0048	0.7161		
Treatment F	461.692	370.155	18.056	6.955	3.663	1.418	8.761		
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	0.1570	0.0001		

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code	CHEAL	SETFA	AMBTR	AMARE	CHEAL	
Pest Scientific Name	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Amaranthus ret>	Chenopodium al>	
Pest Name	Common lambsqu>	Giant foxtail	Giant ragweed	Redroot pigweed	Common lambsqu>	
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
Rating Date	7-24-2012	7-31-2012	7-31-2012	7-31-2012	7-31-2012	10-17-2012
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	YIELD
Rating Unit	%	%	%	%	%	bu/ac
Number of Subsamples	1	1	1	1	1	1
Crop Stage Scale		R4	R4	R4	R4	
Pest Stage Majority	34 IN	37 IN	75 IN	36 IN	35 IN	
Pest Density, Unit	10 YD2	25 FT2	6 YD2	7 FT2	5 FT2	
Assessed By	MW	MW	MW	MW	MW	
Days After First/Last Applic.	70 19	77 26	77 26	77 26	77 26	155 104
Plant-Eval Interval	71 DP-1	78 DP-1	78 DP-1	78 DP-1	78 DP-1	156 DP-1
Days After Emergence	63 DE-1	70 DE-1	70 DE-1	70 DE-1	70 DE-1	148 DE-1
Trt Treatment	Rate	Rate	Rate	Rate	Rate	Rate
No. Name	Unit	Unit	Unit	Unit	Unit	Unit
1 Prefix (5.29 EC)	1.32 lb ai/a	A	97.5 a	95.5 abc	92.3 a	96.3 a
Roundup PowerMax 4.5 SL	0.56 lb ae/a	B				
AMS - Liquid	17 lb ai/100 gal	B				
2 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	91.3 a	87.5 d	89.8 a	82.5 b
AMS - Liquid	17 lb ai/100 gal	B				
3 Roundup PowerMax 4.5 SL	1.5 lb ae/a	B	95.8 a	91.8 a-d	94.8 a	91.3 ab
AMS - Liquid	17 lb ai/100 gal	B				
4 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	B	96.5 a	93.8 a-d	98.0 a	96.3 a
COC	1 % v/v	B				
AMS - Liquid	17 lb ai/100 gal	B				
5 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	90.0 a	91.3 a-d	95.5 a	88.8 ab
Cobra	0.195 lb ai/a	B				
COC	1 % v/v	B				
AMS - Liquid	17 lb ai/100 gal	B				
6 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	96.8 a	95.5 abc	98.5 a	96.8 a
AMS - Liquid	17 lb ai/100 gal	B				
Flexstar (1.88 L)	0.305 lb ai/a	C				
COC	1 % v/v	C				
AMS - Liquid	8.5 lb ai/100 gal	C				
7 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	96.8 a	95.5 abc	98.0 a	98.0 a
AMS - Liquid	17 lb ai/100 gal	B				
Flexstar (1.88 L)	0.305 lb ai/a	D				
COC	1 % v/v	D				
AMS - Liquid	8.5 lb ai/100 gal	D				
8 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	95.5 a	91.8 a-d	93.3 a	94.8 a
AMS - Liquid	17 lb ai/100 gal	B				
Cobra	0.195 lb ai/a	C				
NIS	0.25 % v/v	C				
AMS - Liquid	4 lb ai/a	C				

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	CHEAL	SETFA	AMBTR	AMARE	CHEAL			
Pest Scientific Name	Chenopodium al>	Setaria faberi	Ambrosia trif>	Amaranthus ret>	Chenopodium al>			
Pest Name	Common lambsqu>	Giant foxtail	Giant ragweed	Redroot pigweed	Common lambsqu>			
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		
Rating Date	7-24-2012	7-31-2012	7-31-2012	7-31-2012	7-31-2012	10-17-2012		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	YIELD		
Rating Unit	%	%	%	%	%	bu/ac		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Scale		R4	R4	R4	R4			
Pest Stage Majority	34 IN	37 IN	75 IN	36 IN	35 IN			
Pest Density, Unit	10 YD2	25 FT2	6 YD2	7 FT2	5 FT2			
Assessed By	MW	MW	MW	MW	MW			
Days After First/Last Applic.	70 19	77 26	77 26	77 26	77 26	155 104		
Plant-Eval Interval	71 DP-1	78 DP-1	78 DP-1	78 DP-1	78 DP-1	156 DP-1		
Days After Emergence	63 DE-1	70 DE-1	70 DE-1	70 DE-1	70 DE-1	148 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	8	9	10	11	12	13
9 Roundup PowerMax 4.5 SL	0.56 lb ae/a	B	95.5 a	90.0 bcd	99.0 a	93.0 ab	95.3 a	63.95 a
AMS - Liquid	17 lb ai/100 gal	B						
Cobra	0.195 lb ai/a	D						
NIS	0.25 % v/v	D						
AMS - Liquid	4 lb ai/a	D						
10 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	B	97.5 a	95.0 abc	99.0 a	94.5 a	97.0 a	61.00 a
COC	1 % v/v	B						
AMS - Liquid	17 lb ai/100 gal	B						
Cobra	0.125 lb ai/a	D						
NIS	0.25 % v/v	D						
AMS - Liquid	4 lb ai/a	D						
11 Prefix (5.29 EC)	1.32 lb ai/a	A	97.5 a	97.5 ab	96.5 a	99.0 a	96.5 a	58.80 a
Roundup PowerMax 4.5 SL	0.56 lb ae/a	E						
AMS - Liquid	17 lb ai/100 gal	E						
12 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	93.5 a	91.3 a-d	91.0 a	89.8 ab	93.8 a	60.70 a
AMS - Liquid	17 lb ai/100 gal	E						
13 Roundup PowerMax 4.5 SL	1.5 lb ae/a	E	92.3 a	92.5 a-d	96.8 a	93.8 a	92.5 a	58.43 a
AMS - Liquid	17 lb ai/100 gal	E						
14 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	E	92.3 a	91.3 a-d	92.0 a	98.0 a	96.0 a	58.13 a
COC	1 % v/v	E						
AMS - Liquid	17 lb ai/100 gal	E						
15 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	92.8 a	88.8 cd	90.3 a	92.3 ab	91.3 a	56.95 a
Cobra	0.195 lb ai/a	E						
COC	1 % v/v	E						
AMS - Liquid	17 lb ai/100 gal	E						
16 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	95.5 a	98.0 a	99.0 a	99.0 a	98.5 a	59.50 a
AMS - Liquid	17 lb ai/100 gal	E						
Flexstar (1.88 L)	0.305 lb ai/a	F						
COC	1 % v/v	F						
AMS - Liquid	8.5 lb ai/100 gal	F						
17 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	98.0 a	96.5 ab	98.0 a	98.5 a	97.5 a	56.93 a
AMS - Liquid	17 lb ai/100 gal	E						
Flexstar (1.88 L)	0.305 lb ai/a	G						
COC	1 % v/v	G						
AMS - Liquid	8.5 lb ai/100 gal	G						
18 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	92.7 a	91.8 a-d	96.8 a	91.8 ab	83.3 a	52.48 a
AMS - Liquid	17 lb ai/100 gal	E						
Cobra	0.195 lb ai/a	F						
NIS	0.25 % v/v	F						
AMS - Liquid	4 lb ai/a	F						

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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		
Rating Date	7-24-2012	7-31-2012	7-31-2012	7-31-2012	7-31-2012	10-17-2012		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	YIELD		
Rating Unit	%	%	%	%	%	bu/ac		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Scale		R4	R4	R4	R4			
Pest Stage Majority	34 IN	37 IN	75 IN	36 IN	35 IN			
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Assessed By	MW	MW	MW	MW	MW			
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Plant-Eval Interval	71 DP-1	78 DP-1	78 DP-1	78 DP-1	78 DP-1	156 DP-1		
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Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	8	9	10	11	12	13
19 Roundup PowerMax 4.5 SL	0.56 lb ae/a	E	94.3 a	93.0 a-d	93.5 a	99.0 a	94.8 a	60.60 a
AMS - Liquid	17 lb ai/100 gal	E						
Cobra	0.195 lb ai/a	G						
NIS	0.25 % v/v	G						
AMS - Liquid	4 lb ai/a	G						
20 Flexstar GT 3.5 (2.82 SL)	0.0103 lb ae/a	E	94.5 a	95.5 abc	94.5 a	99.0 a	94.8 a	59.53 a
COC	1 % v/v	E						
AMS - Liquid	17 lb ai/100 gal	E						
Cobra	0.125 lb ai/a	G						
NIS	0.25 % v/v	G						
AMS - Liquid	4 lb ai/a	G						
LSD (P=.05)			6.19	4.19	7.27	6.93	9.48	6.661
Standard Deviation			4.38	2.96	5.14	4.90	6.70	4.710
CV			4.62	3.18	5.39	5.18	7.09	7.91
Bartlett's X2			33.597	40.67	31.24	32.741	101.752	17.68
P(Bartlett's X2)			0.02*	0.001*	0.013*	0.005*	0.001*	0.544
Replicate F			2.773	6.564	2.159	2.639	2.762	8.167
Replicate Prob(F)			0.0500	0.0007	0.1028	0.0582	0.0503	0.0001
Treatment F			1.148	3.793	1.451	3.137	0.996	1.483
Treatment Prob(F)			0.3336	0.0001	0.1405	0.0004	0.4788	0.1273

Purdue University

Wisconsin GRW

Trial ID: 12S-THP-CTS-48 Protocol ID: 12S-THP-CTS-48
Location: Throckmorton Study Director:
Project ID: Investigator: Dr. Bill Johnson
Sponsor Contact:

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, = US

SETFA, Setaria faberi, = US

AMARE, Amaranthus retroflexus, = US

CHEAL, Chenopodium album, = 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

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

37 DP-1 = 1 GLXMA 5-14-2012

71 DP-1 = 1 GLXMA 5-14-2012

78 DP-1 = 1 GLXMA 5-14-2012

156 DP-1 = 1 GLXMA 5-14-2012