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DTS Weed Management System

Trial ID: 11S-THP-CTS-51 Protocol ID: 11S-THP-CTS-50
 Location: Throckmorton Project ID: 2011-01-07-13 Study Director: White/Marquardt Investigator: Dr. Bill Johnson
 Sponsor Contact: Monsanto - John Willis

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: 4-26-2011

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

Description: Dicamba Tolerant

BBCH Scale: BSOY **Planting Date:** 6-8-2011
Planting Method: PLANTD planted **Rate, Unit:** 124000 S/A

Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*

Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*

Common Name: Giant ragweed

Pest 3 Type: W **Code:** ABUTH *Abutilon theophrasti*

Common Name: Velvetleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field

Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 300 FT² **Tillage Type:** CONTIL conventional-till

Replications: 4

Study Design: RACOB1 Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

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Soil Description

Description Name: TPAC - Field 4B

% OM: 2.9 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Toronto-Millbrook
CEC: 13.3

Application Description

	A	B
Application Date:	6-18-2011	7-5-2011
Time of Day:	4-4:45 PM	9:30 AM
Application Method:	SPRAY	SPRAY
Application Placement:	FOLIAR	FOLIAR
Applied By:		BM
Air Temperature, Unit:	62 F	77 F
% Relative Humidity:	53	52
Wind Velocity, Unit:	3.4 MPH	2 MPH
Wind Direction:	W	N
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	63 F	76 F
Soil Moisture:	DRY	SLIWET
% Cloud Cover:	95	0

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH
Stage Majority, Percent:		V3

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Density, Unit:		20 YD2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Height, Unit:		6 IN
Height Minimum, Maximum:		5 7
Density, Unit:		3 YD2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6
Density, Unit:		2 YD2

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Application Equipment

	A	B
Appl. Equipment:	CO2 FORD	CO2 BKPK
Equipment Type:	SPTRMO	SPRBAC
Operation Pressure, Unit:		17 PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	XR 100 02	XR 110 02
Nozzle Spacing, Unit:	20 IN	15 IN
Nozzles/Row:	6	8
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	20 IN	18 IN
Ground Speed, Unit:	2.1 MPH	3 MPH
Carrier:	MEIGS	H20
Water Hardness (ppm CaCO3):		150
Spray Volume, Unit:	20 gal/ac	15 gal/ac
Mix Size, Unit:	2.5 liters	1.8 liters
Propellant:	CO2	CO2
Tank Mix (Y/N):		N no

No. Date By Deviations

1.5-4-2011 PowerMax and Class Act not applied in Application A
Reasons: Plots tilled prior to planting. No need for burndown herbicides.

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DTS Weed Management System

Trial ID: 11S-THP-CTS-51 Protocol ID: 11S-THP-CTS-50
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: 2011-01-07-13 Investigator: Dr. Bill Johnson
 Sponsor Contact: Monsanto - John Willis

Pest Type		W Weed	W Weed	W Weed	W Weed						
Pest Code		SETFA	ABUTH	AMBTR	AMATA						
Pest Scientific Name		Setaria faberi	Abutilon theop>	Ambrosia trifi>	Amaranthus tam>						
Pest Name		Giant foxtail	Velvetleaf	Giant ragweed	Common waterhe>						
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				
Description											
Rating Date	6-21-2011	6-21-2011	6-21-2011	6-21-2011	6-21-2011	7-15-2011	7-15-2011				
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYLMA	PHYNLS				
Rating Unit	%	%	%	%	%						
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority		2 IN	1.5 IN	4 IN	3 IN						
Pest Stage Majority		30 YD2	1 YD2	1 YD2	1 YD2						
Pest Density, Unit Assessed By											
Days After First/Last Applic.	3 3	3 3	3 3	3 3	3 3	27 10	27 10				
Plant-Eval Interval	13 DP-1	13 DP-1	13 DP-1	13 DP-1	13 DP-1	37 DP-1	37 DP-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7
1	Valor SX (51 WG) 2,4-D Ester Roundup WeatherMax 4.5 SL Class Act NG	0.0638 0.688 0.773 2.5	lb ai/a lb ae/a lb ae/a % v/v	A A B B	0.0 a	63.8 a-d	89.4 a	87.8 a	84.1 a	0.0 b	0.0 c
2	Valor SX (51 WG) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.0638 0.5 0.773 2.5	lb ai/a lb ae/a lb ae/a % v/v	A A B B	0.0 a	66.3 a-d	94.3 a	59.5 a	81.8 a	0.8 b	0.0 c
3	Valor SX (51 WG) Classic Clarity (4 SL) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.056 0.0194 0.5 0.5 0.773 2.5	lb ai/a lb ai/a lb ae/a lb ae/a lb ae/a % v/v	A A A B B B	0.0 a	68.8 a-d	95.5 a	86.1 a	89.5 a	1.3 b	0.8 c
4	Valor SX (51 WG) Classic Clarity (4 SL) Clarity (4 SL) Warrant (3 CS) Roundup WeatherMax 4.5 SL Class Act NG	0.056 0.0194 0.5 0.5 1.25 0.773 2.5	lb ai/a lb ai/a lb ae/a lb ae/a lb ai/a lb ae/a % v/v	A A A B B B B	0.0 a	67.5 a-d	99.0 a	89.5 a	39.8 ab	1.5 b	2.0 abc
5	Valor SX (51 WG) Classic Clarity (4 SL) Flexstar (1.88 L) Roundup WeatherMax 4.5 SL Class Act NG	0.056 0.0194 0.5 0.353 0.773 2.5	lb ai/a lb ai/a lb ae/a lb ai/a lb ae/a % v/v	A A A B B B	0.0 a	55.0 cd	99.0 a	89.3 a	67.3 a	7.8 a	5.5 a
6	Valor SX (51 WG) Clarity (4 SL) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.0638 0.5 0.5 0.773 2.5	lb ai/a lb ae/a lb ae/a lb ae/a % v/v	A A B B B	0.0 a	40.0 d	82.0 a	67.0 a	72.0 a	0.8 b	2.3 abc

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 Pest Code Pest Scientific Name		W Weed SETFA Setaria faberi	W Weed ABUTH Abutilon theop>	W Weed AMBTR Ambrosia trifi>	W Weed AMATA Amaranthus tam>				
Pest Name		Giant foxtail	Velvetleaf	Giant ragweed	Common waterhe>				
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 Description	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	6-21-2011	6-21-2011	6-21-2011	6-21-2011	6-21-2011	7-15-2011	7-15-2011		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYLMA	PHYNLS		
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority									
Pest Stage Majority		2 IN	1.5 IN	4 IN	3 IN				
Pest Density, Unit Assessed By		30 YD2	1 YD2	1 YD2	1 YD2				
Days After First/Last Applic.	3 3	3 3	3 3	3 3	3 3	27 10	27 10		
Plant-Eval Interval	13 DP-1	13 DP-1	13 DP-1	13 DP-1	13 DP-1	37 DP-1	37 DP-1		
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit Code	1	2	3	4	5	6	7
7 Valor SX (51 WG)	0.0638 lb ai/a	A	0.0 a	37.5 d	86.8 a	67.0 a	53.5 ab	2.5 b	2.0 abc
Clarity (4 SL)	0.5 lb ae/a	A							
Clarity (4 SL)	0.5 lb ae/a	B							
Warrant (3 CS)	1.25 lb ai/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							
8 Valor SX (51 WG)	0.0638 lb ai/a	A	0.0 a	67.5 a-d	99.0 a	74.3 a	94.3 a	9.3 a	5.0 ab
Clarity (4 SL)	0.5 lb ae/a	A							
Flexstar (1.88 L)	0.353 lb ai/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							
9 Authority XL (70 WG)	0.175 lb ai/a	A	0.0 a	47.5 d	74.3 a	74.3 a	74.3 a	1.3 b	2.5 abc
Clarity (4 SL)	0.5 lb ae/a	A							
Clarity (4 SL)	0.5 lb ae/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							
10 Authority XL (70 WG)	0.175 lb ai/a	A	0.0 a	42.5 d	99.0 a	29.8 a	86.8 a	0.0 b	0.8 c
Clarity (4 SL)	0.5 lb ae/a	A							
Clarity (4 SL)	0.5 lb ae/a	B							
Warrant (3 CS)	1.25 lb ai/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							
11 Authority XL (70 WG)	0.175 lb ai/a	A	0.0 a	57.5 bcd	89.3 a	65.0 a	99.0 a	7.8 a	5.0 ab
Clarity (4 SL)	0.5 lb ae/a	A							
Flexstar (1.88 L)	0.353 lb ai/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							
12 Boundary (6.5 EC)	1.219 lb ai/a	A	0.0 a	91.3 a	62.5 a	52.3 a	99.0 a	0.8 b	0.8 c
Clarity (4 SL)	0.5 lb ae/a	A							
Clarity (4 SL)	0.5 lb ae/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							
13 Boundary (6.5 EC)	1.219 lb ai/a	A	0.0 a	81.3 abc	84.8 a	57.3 a	74.3 a	0.0 b	1.5 bc
Clarity (4 SL)	0.5 lb ae/a	A							
Clarity (4 SL)	0.5 lb ae/a	B							
Warrant (3 CS)	1.25 lb ai/a	B							
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B							
Class Act NG	2.5 % v/v	B							

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Pest Type			W Weed SETFA Setaria faberi	W Weed AMATA Amaranthus tam>	W Weed ECHCG Echinochloa cr>	W Weed GGGAN Annual grasses	W Weed AMBTR Ambrosia trif>		
Pest Code									
Pest Scientific Name			Giant foxtail	Common waterhe>	Common barnyar>	Annual grasses	Giant ragweed		
Pest Name									
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 Description	Soybean 0	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	7-15-2011	7-25-2011	7-25-2011	7-25-2011	7-25-2011	8-22-2011	8-22-2011		
Rating Type	PHYSTU	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit		% ₁	% ₁	% ₁	% ₁	% ₁	% ₁		
Number of Subsamples	1								
Crop Stage Majority		R2	R2	R2	R2	R3	R3		
Pest Stage Majority			42 IN	30 IN	42 IN	40 in	60 in		
Pest Density, Unit Assessed By		RT/RH/JR	50 YD2 RT/RH/JR	8 YD2 RT/RH/JR	10 YD2 RT/RH/JR	10 YD2	3 YD2		
Days After First/Last Applic.	27 10	37 20	37 20	37 20	37 20	65 48	65 48		
Plant-Eval Interval	37 DP-1	47 DP-1	47 DP-1	47 DP-1	47 DP-1	75 DP-1	75 DP-1		
Trt Treatment No. Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
	Unit	Unit	Unit	Unit	Unit	Unit	Unit		
	Code	Code	Code	Code	Code	Code	Code		
	8	9	10	11	12	13	14		
1 Valor SX (51 WG) 2,4-D Ester Roundup WeatherMax 4.5 SL Class Act NG	0.0638 lb ai/a 0.688 lb ae/a 0.773 lb ae/a 2.5 % v/v	A A B B	0.0 a	1.50 ab	100.0 a	100.0 a	75.0 a	98.5 a	98.0 a
2 Valor SX (51 WG) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.0638 lb ai/a 0.5 lb ae/a 0.773 lb ae/a 2.5 % v/v	A A B B	0.0 a	2.25 ab	100.0 a	100.0 a	100.0 a	99.0 a	97.5 a
3 Valor SX (51 WG) Classic Clarity (4 SL) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.056 lb ai/a 0.0194 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 0.773 lb ae/a 2.5 % v/v	A A A B B B	0.0 a	1.63 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
4 Valor SX (51 WG) Classic Clarity (4 SL) Clarity (4 SL) Warrant (3 CS) Roundup WeatherMax 4.5 SL Class Act NG	0.056 lb ai/a 0.0194 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 1.25 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A A B B B B	0.0 a	3.13 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
5 Valor SX (51 WG) Classic Clarity (4 SL) Flexstar (1.88 L) Roundup WeatherMax 4.5 SL Class Act NG	0.056 lb ai/a 0.0194 lb ai/a 0.5 lb ae/a 0.353 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A A B B B	0.0 a	2.25 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
6 Valor SX (51 WG) Clarity (4 SL) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.0638 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 0.773 lb ae/a 2.5 % v/v	A A B B B	0.0 a	2.00 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a

Means followed by same letter do not significantly differ (P=0.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type Pest Code Pest Scientific Name			W Weed SETFA Setaria faberi	W Weed AMATA Amaranthus tam>	W Weed ECHCG Echinochloa cr>	W Weed GGGAN Annual grasses	W Weed AMBTR Ambrosia trifi>				
Pest Name			Giant foxtail	Common waterhe>	Common barnyar>	Annual grasses	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 Description	Soybean 0	Soybean	Soybean	Soybean	Soybean	Soybean					
Rating Date	7-15-2011	7-25-2011	7-25-2011	7-25-2011	7-25-2011	8-22-2011	8-22-2011				
Rating Type	PHYSTU	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit		%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1	1				
Crop Stage Majority		R2	R2	R2	R2	R3					
Pest Stage Majority			42 IN	30 IN	42 IN	40 in	60 in				
Pest Density, Unit Assessed By		RT/RH/JR	50 YD2 RT/RH/JR	8 YD2 RT/RH/JR	10 YD2 RT/RH/JR	10 YD2	3 YD2				
Days After First/Last Applic.	27 10	37 20	37 20	37 20	37 20	65 48	65 48				
Plant-Eval Interval	37 DP-1	47 DP-1	47 DP-1	47 DP-1	47 DP-1	75 DP-1	75 DP-1				
Trt No.	Treatment Name	Rate	Appl Unit	Code	8	9	10	11	12	13	14
7	Valor SX (51 WG) Clarity (4 SL) Clarity (4 SL) Warrant (3 CS) Roundup WeatherMax 4.5 SL Class Act NG	0.0638 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 1.25 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A B B B B		0.8 a	4.63 a	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
8	Valor SX (51 WG) Clarity (4 SL) Flexstar (1.88 L) Roundup WeatherMax 4.5 SL Class Act NG	0.0638 lb ai/a 0.5 lb ae/a 0.353 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A B B B		0.0 a	2.75 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
9	Authority XL (70 WG) Clarity (4 SL) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	0.175 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 0.773 lb ae/a 2.5 % v/v	A A B B B		1.3 a	4.75 a	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
10	Authority XL (70 WG) Clarity (4 SL) Clarity (4 SL) Warrant (3 CS) Roundup WeatherMax 4.5 SL Class Act NG	0.175 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 1.25 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A B B B B		0.8 a	4.00 a	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
11	Authority XL (70 WG) Clarity (4 SL) Flexstar (1.88 L) Roundup WeatherMax 4.5 SL Class Act NG	0.175 lb ai/a 0.5 lb ae/a 0.353 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A B B B		0.0 a	2.88 ab	100.0 a	100.0 a	100.0 a	99.0 a	98.5 a
12	Boundary (6.5 EC) Clarity (4 SL) Clarity (4 SL) Roundup WeatherMax 4.5 SL Class Act NG	1.219 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 0.773 lb ae/a 2.5 % v/v	A A B B B		0.0 a	2.00 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
13	Boundary (6.5 EC) Clarity (4 SL) Clarity (4 SL) Warrant (3 CS) Roundup WeatherMax 4.5 SL Class Act NG	1.219 lb ai/a 0.5 lb ae/a 0.5 lb ae/a 1.25 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A B B B B		0.0 a	2.38 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
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Pest Type			W Weed SETFA	W Weed AMATA	W Weed ECHCG	W Weed GGGAN	W Weed AMBTR			
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Pest Scientific Name										
Pest Name			Giant foxtail	Common waterhe>	Common barnyar>	Annual grasses	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 Description	Soybean 0	Soybean	Soybean	Soybean	Soybean	Soybean				
Rating Date	7-15-2011	7-25-2011	7-25-2011	7-25-2011	7-25-2011	8-22-2011	8-22-2011			
Rating Type	PHYSTU	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit		%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Crop Stage Majority		R2	R2	R2	R2	R3				
Pest Stage Majority			42 IN	30 IN	42 IN	40 in	60 in			
Pest Density, Unit Assessed By		RT/RH/JR	50 YD2 RT/RH/JR	8 YD2 RT/RH/JR	10 YD2 RT/RH/JR	10 YD2	3 YD2			
Days After First/Last Applic.	27 10	37 20	37 20	37 20	37 20	65 48	65 48			
Plant-Eval Interval	37 DP-1	47 DP-1	47 DP-1	47 DP-1	47 DP-1	75 DP-1	75 DP-1			
Trt No.	Treatment	Rate	Appl Code	8	9	10	11	12	13	14
14	Boundary (6.5 EC) Clarity (4 SL) Flexstar (1.88 L) Roundup WeatherMax 4.5 SL Class Act NG	1.219 lb ai/a 0.5 lb ae/a 0.353 lb ai/a 0.773 lb ae/a 2.5 % v/v	A A B B B	0.0 a	2.25 ab	100.0 a	100.0 a	100.0 a	99.0 a	99.0 a
15	Untreated Check			0.0 a	0.00 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
LSD (P=.05)		1.20	2.250	0.00	0.00	18.45	0.37	1.07		
Standard Deviation		0.84	1.575	0.00	0.00	12.91	0.26	0.75		
CV		456.36	61.55	0.0	0.0	14.08	0.28	0.81		
Bartlett's X2		1.102	32.448	0.0	0.0	0.0	0.0	1.462		
P(Bartlett's X2)		0.577	0.002*	0.481		
Replicate F		1.357	1.754	0.000	0.000	1.000	1.000	1.424		
Replicate Prob(F)		0.2690	0.1707	1.0000	1.0000	0.4023	0.4023	0.2493		
Treatment F		0.891	2.430	0.000	0.000	16.429	39176.719	4632.662		
Treatment Prob(F)		0.5736	0.0134	1.0000	1.0000	0.0001	0.0001	0.0001		

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.

Purdue University

Pest Type	W Weed	W Weed	
Pest Code	AMATA	ABUTH	
Pest Scientific Name	Amaranthus tam>	Abutilon theop>	
Pest Name	Common waterhe>	Velvetleaf	
Crop Code			GLXMA
BBCH Scale			BSOY
Crop Scientific Name			Glycine max
Crop Name			Soybean
Description			
Rating Date	8-22-2011	8-22-2011	8-22-2011
Rating Type	CONTRO	CONTRO	HEIGHT
Rating Unit	%	%	cm
Number of Subsamples	1	1	4
Crop Stage Majority			
Pest Stage Majority	36 in	34 in	
Pest Density, Unit	5 YD2	4 YD2	
Assessed By			
Days After First/Last Applic.	65 48	65 48	65 48
Plant-Eval Interval	75 DP-1	75 DP-1	75 DP-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit Code		
1 Valor SX (51 WG)	0.0638 lb ai/a A		15
2,4-D Ester	0.688 lb ae/a A		16
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		17
Class Act NG	2.5 % v/v B		
99.0 a			99.0 a
99.0 a			81.500 a
2 Valor SX (51 WG)	0.0638 lb ai/a A		15
Clarity (4 SL)	0.5 lb ae/a A		16
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		17
Class Act NG	2.5 % v/v B		
99.0 a			99.0 a
99.0 a			76.313 a
3 Valor SX (51 WG)	0.056 lb ai/a A		15
Classic	0.0194 lb ai/a A		16
Clarity (4 SL)	0.5 lb ae/a A		17
Clarity (4 SL)	0.5 lb ae/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
99.0 a			99.0 a
99.0 a			84.063 a
4 Valor SX (51 WG)	0.056 lb ai/a A		15
Classic	0.0194 lb ai/a A		16
Clarity (4 SL)	0.5 lb ae/a A		17
Clarity (4 SL)	0.5 lb ae/a B		
Warrant (3 CS)	1.25 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
99.0 a			99.0 a
99.0 a			73.813 a
5 Valor SX (51 WG)	0.056 lb ai/a A		15
Classic	0.0194 lb ai/a A		16
Clarity (4 SL)	0.5 lb ae/a A		17
Flexstar (1.88 L)	0.353 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
99.0 a			99.0 a
99.0 a			83.250 a
6 Valor SX (51 WG)	0.0638 lb ai/a A		15
Clarity (4 SL)	0.5 lb ae/a A		16
Clarity (4 SL)	0.5 lb ae/a B		17
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
99.0 a			99.0 a
99.0 a			81.563 a

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
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Purdue University

Pest Type	W Weed	W Weed	
Pest Code	AMATA	ABUTH	
Pest Scientific Name	Amaranthus tam>	Abutilon theop>	
Pest Name	Common waterhe>	Velvetleaf	
Crop Code			GLXMA
BBCH Scale			BSOY
Crop Scientific Name			Glycine max
Crop Name			Soybean
Description			
Rating Date	8-22-2011	8-22-2011	8-22-2011
Rating Type	CONTRO	CONTRO	HEIGHT
Rating Unit	%	%	cm
Number of Subsamples	1	1	4
Crop Stage Majority			
Pest Stage Majority	36 in	34 in	
Pest Density, Unit	5 YD2	4 YD2	
Assessed By			
Days After First/Last Applic.	65 48	65 48	65 48
Plant-Eval Interval	75 DP-1	75 DP-1	75 DP-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit Code		
		15	16
			17
7 Valor SX (51 WG)	0.0638 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Clarity (4 SL)	0.5 lb ae/a B		
Warrant (3 CS)	1.25 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
73.375 a			
8 Valor SX (51 WG)	0.0638 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Flexstar (1.88 L)	0.353 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
76.188 a			
9 Authority XL (70 WG)	0.175 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Clarity (4 SL)	0.5 lb ae/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
64.875 a			
10 Authority XL (70 WG)	0.175 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Clarity (4 SL)	0.5 lb ae/a B		
Warrant (3 CS)	1.25 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
74.875 a			
11 Authority XL (70 WG)	0.175 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Flexstar (1.88 L)	0.353 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
76.938 a			
12 Boundary (6.5 EC)	1.219 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Clarity (4 SL)	0.5 lb ae/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
80.688 a			
13 Boundary (6.5 EC)	1.219 lb ai/a A	99.0 a	99.0 a
Clarity (4 SL)	0.5 lb ae/a A		
Clarity (4 SL)	0.5 lb ae/a B		
Warrant (3 CS)	1.25 lb ai/a B		
Roundup WeatherMax 4.5 SL	0.773 lb ae/a B		
Class Act NG	2.5 % v/v B		
77.313 a			

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.

Purdue University

Pest Type	W Weed	W Weed	
Pest Code	AMATA	ABUTH	
Pest Scientific Name	Amaranthus tam>	Abutilon theop>	
Pest Name	Common waterhe>	Velvetleaf	
Crop Code			GLXMA
BBCH Scale			BSOY
Crop Scientific Name			Glycine max
Crop Name			Soybean
Description			
Rating Date	8-22-2011	8-22-2011	8-22-2011
Rating Type	CONTRO	CONTRO	HEIGHT
Rating Unit	%	%	cm
Number of Subsamples	1	1	4
Crop Stage Majority			
Pest Stage Majority	36 in	34 in	
Pest Density, Unit	5 YD2	4 YD2	
Assessed By			
Days After First/Last Applic.	65 48	65 48	65 48
Plant-Eval Interval	75 DP-1	75 DP-1	75 DP-1
Trt Treatment	Rate	Appl	
No. Name	Rate	Unit Code	
			15
			16
			17
14 Boundary (6.5 EC)	1.219 lb ai/a	A	
Clarity (4 SL)	0.5 lb ae/a	A	
Flexstar (1.88 L)	0.353 lb ai/a	B	
Roundup WeatherMax 4.5 SL	0.773 lb ae/a	B	
Class Act NG	2.5 % v/v	B	
			99.0 a
			99.0 a
			84.500 a
15 Untreated Check			0.0 b
			0.0 b
			77.250 a
LSD (P= .05)	0.00	0.00	14.1578
Standard Deviation	0.00	0.00	9.9071
CV	0.0	0.0	12.74
Bartlett's X2	0.0	0.0	10.777
P(Bartlett's X2)	.	.	0.703
Replicate F	0.000	0.000	4.485
Replicate Prob(F)	1.0000	1.0000	0.0081
Treatment F	0.000	0.000	1.069
Treatment Prob(F)	1.0000	1.0000	0.4110

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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Purdue University

DTS Weed Management System

Trial ID: 11S-THP-CTS-51

Protocol ID: 11S-THP-CTS-50

Location: Throckmorton
Project ID: 2011-01-07-13Study Director: White/Marquardt
Investigator: Dr. Bill Johnson

Sponsor Contact: Monsanto - John Willis

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US

ABUTH, Abutilon theophrasti, = US

AMBTR, Ambrosia trifida, = US

AMATA, Amaranthus tamariscinus, = US

ECHCG, Echinochloa crus-galli, = US

GGGAN, Annual grasses, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

PHYLMA = phytotoxicity - leaf malformation

PHYNLS = phytotoxicity - necrosis, leaf spot

PHYSTU = phytotoxicity - stunting

HEIGHT = height

Rating Unit

% = percent

cm = centimeter

YD2 = per square yard

Plant-Eval Interval

13 DP-1 = 1 GLXMA 6-8-2011

37 DP-1 = 1 GLXMA 6-8-2011

47 DP-1 = 1 GLXMA 6-8-2011

75 DP-1 = 1 GLXMA 6-8-2011