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2013/SOYBEAN/AUTHORITY/MARVEL/PRE/POST/PROGRAM/PURDUE

Trial ID: 13S-THP-CTS-43 Protocol ID: 13S-THP-CTS-43
 Location: Throckmorton Study Director:
 Project ID: SULF.SOY.13.JPR.06 (b) Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

General Trial Information

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

Discipline: H herbicide
Trial Status: E established
Initiation Date: Mar-18-2013

Trial Location

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

Personnel

Study Director: Bill Johnson
Investigator: Dr. Bill Johnson **Title:** Professor
Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** wj@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:** RR
BBCH Scale: BSOY **Planting Date:** May-16-2013
Planting Method: SEEDED seeded **Rate, Unit:** 130000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Soil Moisture: SLIWET slightly wet **Soil Temperature, Unit:** 68 F
Emergence Date: May-22-2013

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

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:** RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

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Maintenance

No.	Date	Maintenance Treatment Name	Rate	Rate Unit
1.	Jul-15-2013	PowerMax	22	OZ/A

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
Application Date:	May-9-2013	Jun-14-2013
Time of Day:	AM	1:30 PM
Application Method:	SPRAY	SPRAY
Application Timing:	PREMCR	EAPOCR
Application Placement:	SOIL	FOLIAR
Applied By:	MW	MW
Air Temperature, Unit:	68 F	83 F
% Relative Humidity:	73	54
Wind Velocity, Unit:	3 MPH	3.6 MPH
Wind Direction:	E	NW
Dew Presence (Y/N):	Y yes	N no
Soil Temperature, Unit:	68 F	83 F
Soil Moisture:	SLIWET	SLIWET
% Cloud Cover:	80	20

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:		3 IN
Density, Unit:		25 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Height, Unit:		7 IN
Density, Unit:		8 YD2

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Application Equipment

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

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 Location: Throckmorton Study Director:
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Reps: 4 Plots: 10 by 30 feet
 Spray vol: 20 gal/ac Mix size: 2.5 liters (min 2.0856)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Unit	Other Rate	Other Rate	Unit	Growth Stage	Appl Code	Appl Description	Amt to Measure	Product	Rep 1	2	3	4
1	UNTREATED														101	405	702	805
2	AUTHORITY XL	70 %W/W	WG	2.8 oz ai/a	4 oz/a		PREMCR A						3.745 g/mx		102	404	602	804
	MARVEL	3 LB/GAL	SC	2.72 oz ai/a	7.25 oz/a		EAPOCR B			V1-V3 SOY		7.083 ml/mx						
	COC	1 % v/v		1 % v/v	1 % v/v		EAPOCR B			V1-V3 SOY		25.0 ml/mx						
3	AUTHORITY XL	70 %W/W	WG	2.8 oz ai/a	4 oz/a		PREMCR A						3.745 g/mx		104	502	704	901
	CADET	0.91 LB/GAL	EC	0.102 oz ai/a	0.9 oz/a		EAPOCR B			V1-V3 SOY		0.8756 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
4	AUTHORITY XL	70 %W/W	WG	2.8 oz ai/a	4 oz/a		PREMCR A						3.745 g/mx		105	402	605	904
	MARVEL	3 LB/GAL	SC	2.72 oz ai/a	7.25 oz/a		EAPOCR B			V1-V3 SOY		7.083 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
5	AUTHORITY FIRST DF	70 %W/W	WG	2.8 oz ai/a	4 oz/a		PREMCR A						3.745 g/mx		201	505	705	905
	MARVEL	3 LB/GAL	SC	2.72 oz ai/a	7.25 oz/a		EAPOCR B			V1-V3 SOY		7.083 ml/mx						
	COC	1 % v/v		1 % v/v	1 % v/v		EAPOCR B			V1-V3 SOY		25.0 ml/mx						
6	AUTHORITY FIRST DF	70 %W/W	WG	2.8 oz ai/a	4 oz/a		PREMCR A						3.745 g/mx		202	501	802	1005
	CADET	0.91 LB/GAL	EC	0.9 oz ai/a	7.9 oz/a		EAPOCR B			V1-V3 SOY		7.726 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
7	AUTHORITY FIRST DF	70 %W/W	WG	2.8 oz ai/a	4 oz/a		PREMCR A						3.745 g/mx		204	401	601	902
	MARVEL	3 LB/GAL	SC	2.72 oz ai/a	7.25 oz/a		EAPOCR B			V1-V3 SOY		7.083 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
8	AUTHORITY MTZ	45 %W/W	WG	7.2 oz ai/a	16 oz/a		PREMCR A						14.98 g/mx		205	305	604	1004
	CADET	0.91 LB/GAL	EC	0.102 oz ai/a	0.9 oz/a		EAPOCR B			V1-V3 SOY		0.8756 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
9	AUTHORITY MTZ	45 %W/W	WG	7.2 oz ai/a	16 oz/a		PREMCR A						14.98 g/mx		301	304	701	1001
	MARVEL	3 LB/GAL	SC	2.72 oz ai/a	7.25 oz/a		EAPOCR B			V1-V3 SOY		7.083 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
10	VALOR SX	51 %W/W	WG	1.02 oz ai/a	2 oz/a		PREMCR A						1.872 g/mx		302	504	801	1002
	COBRA	2 LB/GAL	EC	3 oz ai/a	12 oz/a		EAPOCR B			V1-V3 SOY		11.72 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
11	Valor SX (51 WG)	51 %	WG	0.9 oz ai/a	1.76 oz/a		PREMCR A						1.652 g/mx		103	303	603	803
	Classic	25 %AW/W	DF	0.309 oz ai/a	1.24 oz/a		PREMCR A						1.157 g/mx					
	COBRA	2 LB/GAL	EC	3 oz ai/a	12 oz/a		EAPOCR B			V1-V3 SOY		11.72 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						
12	COMMAND 3ME	3 LB/GAL	CS	0.75 lb ai/a	2 pt/a		PREMCR A						31.25 ml/mx		203	403	703	903
	MARVEL	3 LB/GAL	SC	2.72 oz ai/a	7.25 oz/a		EAPOCR B			V1-V3 SOY		7.083 ml/mx						
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	0.77 lb ae/a	22 oz/a		EAPOCR B			V1-V3 SOY		21.39 ml/mx						
	AMS - Liquid	3.4 LB/GAL	SL	8.5 lb ai/100 gal	10 qt/100 gal		EAPOCR B			V1-V3 SOY		62.49 ml/mx						

Sort Order: Treatment

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 Project ID: SULF.SOY.13.JPR.06 (b) Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL		SETSS	AMBTR
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>		Setaria sp.	Ambrosia trifi>
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>		Foxtail millet	Giant ragweed
Crop Code				GLXMA		
BBCB Scale				BSOY		
Crop Scientific Name				Glycine max		
Crop Name				Soybean		
Rating Date	May-30-2013	May-30-2013	May-30-2013	Jun-5-2013	Jun-5-2013	Jun-5-2013
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V1	V1	V1			
Pest Stage Majority						
Pest Density, Unit						
Assessed By	BM/GT	BM/GT	BM/GT	JH	JH	JH
Days After First/Last Applic.	21 21	21 21	21 21	27 27	27 27	27 27
Plant-Eval Interval	14 DP-1	14 DP-1	14 DP-1	20 DP-1	20 DP-1	20 DP-1
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	14 DE-1	14 DE-1	14 DE-1
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	1	2	3	4
1 UNTREATED		101	0.0	0.0	0.0	0.0
		405	0.0	0.0	0.0	0.0
		702	0.0	0.0	0.0	0.0
		805	0.0	0.0	0.0	0.0
		Mean =	0.0	0.0	0.0	0.0
2 AUTHORITY XL	2.8 oz ai/a	A 102	97.0	90.0	99.0	0.0
MARVEL	2.72 oz ai/a	B 404	99.0	90.0	99.0	0.0
COC	1 % v/v	B 602	95.0	90.0	99.0	0.0
		804	95.0	95.0	99.0	0.0
		Mean =	96.5	91.3	99.0	0.0
3 AUTHORITY XL	2.8 oz ai/a	A 104	97.0	95.0	99.0	0.0
CADET	0.102 oz ai/a	B 502	90.0	95.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 704	97.0	95.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 901	85.0	90.0	99.0	0.0
		Mean =	92.3	93.8	99.0	0.0
4 AUTHORITY XL	2.8 oz ai/a	A 105	97.0	85.0	99.0	0.0
MARVEL	2.72 oz ai/a	B 402	97.0	95.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 605	97.0	95.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 904	97.0	90.0	99.0	0.0
		Mean =	97.0	91.3	99.0	0.0
5 AUTHORITY FIRST DF	2.8 oz ai/a	A 201	95.0	90.0	97.0	0.0
MARVEL	2.72 oz ai/a	B 505	99.0	95.0	99.0	0.0
COC	1 % v/v	B 705	97.0	95.0	99.0	0.0
		905	97.0	80.0	99.0	0.0
		Mean =	97.0	90.0	98.5	0.0
6 AUTHORITY FIRST DF	2.8 oz ai/a	A 202	97.0	97.0	99.0	0.0
CADET	0.9 oz ai/a	B 501	90.0	75.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 802	95.0	95.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1005	97.0	90.0	99.0	0.0
		Mean =	94.8	89.3	99.0	0.0

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Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL		SETSS	AMBTR
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>		Setaria sp.	Ambrosia trifi>
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>		Foxtail millet	Giant ragweed
Crop Code				GLXMA		
BBCH Scale				BSOY		
Crop Scientific Name				Glycine max		
Crop Name				Soybean		
Rating Date	May-30-2013	May-30-2013	May-30-2013	Jun-5-2013	Jun-5-2013	Jun-5-2013
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V1	V1	V1			
Pest Stage Majority						
Pest Density, Unit						
Assessed By	BM/GT	BM/GT	BM/GT	JH	JH	JH
Days After First/Last Applic.	21 21	21 21	21 21	27 27	27 27	27 27
Plant-Eval Interval	14 DP-1	14 DP-1	14 DP-1	20 DP-1	20 DP-1	20 DP-1
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	14 DE-1	14 DE-1	14 DE-1
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	1	2	3	4
7 AUTHORITY FIRST DF	2.8 oz ai/a	A 204	99.0	95.0	99.0	0.0
MARVEL	2.72 oz ai/a	B 401	95.0	75.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 601	95.0	90.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 902	95.0	95.0	99.0	0.0
		Mean =	96.0	88.8	99.0	0.0
8 AUTHORITY MTZ	7.2 oz ai/a	A 205	97.0	80.0	99.0	0.0
CADET	0.102 oz ai/a	B 305	97.0	90.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 604	99.0	95.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1004	97.0	95.0	99.0	0.0
		Mean =	97.5	90.0	99.0	0.0
9 AUTHORITY MTZ	7.2 oz ai/a	A 301	85.0	85.0	99.0	0.0
MARVEL	2.72 oz ai/a	B 304	97.0	95.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 701	95.0	90.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1001	95.0	85.0	99.0	0.0
		Mean =	93.0	88.8	99.0	0.0
10 VALOR SX	1.02 oz ai/a	A 302	97.0	97.0	99.0	5.0
COBRA	3 oz ai/a	B 504	99.0	97.0	99.0	5.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 801	90.0	95.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1002	97.0	77.0	99.0	5.0
		Mean =	95.8	91.5	99.0	3.8
11 Valor SX (51 WG)	0.9 oz ai/a	A 103	90.0	90.0	99.0	0.0
Classic	0.309 oz ai/a	A 303	97.0	97.0	99.0	5.0
COBRA	3 oz ai/a	B 603	97.0	97.0	99.0	5.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 803	97.0	90.0	99.0	5.0
AMS - Liquid	8.5 lb ai/100 gal	B				40.0
		Mean =	95.3	93.5	99.0	3.8
12 COMMAND 3ME	0.75 lb ai/a	A 203	99.0	90.0	99.0	0.0
MARVEL	2.72 oz ai/a	B 403	99.0	97.0	99.0	0.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 703	99.0	97.0	99.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 903	99.0	95.0	99.0	0.0
		Mean =	99.0	94.8	99.0	0.0

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR		AMBTR	SETFA	AMBTR	SETFA
Pest Scientific Name	Setaria faberi	Ambrosia trifi>		Ambrosia trifi>	Setaria faberi	Ambrosia trifi>	Setaria faberi
Pest Name	Giant foxtail	Giant ragweed		Giant ragweed	Giant foxtail	Giant ragweed	Giant foxtail
Crop Code			GLXMA				
BBCB Scale			BSOY				
Crop Scientific Name			Glycine max				
Crop Name			Soybean				
Rating Date	Jun-14-2013	Jun-14-2013	Jun-19-2013	Jun-19-2013	Jun-19-2013	Jun-26-2013	Jun-26-2013
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority	V3	V3	V4				
Pest Stage Majority	3 IN	7 IN					
Pest Density, Unit	25 FT2	8 YD2					
Assessed By	MW	MW	Jl	Jl	Jl	Jl	Jl
Days After First/Last Applic.	36 36	36 36	41 5	41 5	41 5	48 12	48 12
Plant-Eval Interval	29 DP-1	29 DP-1	34 DP-1	34 DP-1	34 DP-1	41 DP-1	41 DP-1
Days After Emergence	23 DE-1	23 DE-1	28 DE-1	28 DE-1	28 DE-1	35 DE-1	35 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	7	8	9	10	11
1 UNTREATED		101	0.0	0.0	0.0	0.0	0.0
		405	0.0	0.0	0.0	0.0	0.0
		702	0.0	0.0	0.0	0.0	0.0
		805	0.0	0.0	0.0	0.0	0.0
		Mean =	0.0	0.0	0.0	0.0	0.0
2 AUTHORITY XL	2.8 oz ai/a	A 102	90.0	75.0	5.0	50.0	100.0
MARVEL	2.72 oz ai/a	B 404	90.0	50.0	5.0	60.0	80.0
COC	1 % v/v	B 602	85.0	55.0	5.0	70.0	70.0
		804	80.0	70.0	5.0	40.0	65.0
		Mean =	86.3	62.5	5.0	55.0	78.8
3 AUTHORITY XL	2.8 oz ai/a	A 104	85.0	70.0	0.0	50.0	80.0
CADET	0.102 oz ai/a	B 502	70.0	70.0	5.0	40.0	95.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 704	95.0	60.0	5.0	35.0	90.0
AMS - Liquid	8.5 lb ai/100 gal	B 901	50.0	40.0	0.0	35.0	60.0
		Mean =	75.0	60.0	2.5	40.0	81.3
4 AUTHORITY XL	2.8 oz ai/a	A 105	85.0	75.0	5.0	60.0	85.0
MARVEL	2.72 oz ai/a	B 402	93.0	80.0	5.0	70.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 605	93.0	60.0	5.0	75.0	100.0
AMS - Liquid	8.5 lb ai/100 gal	B 904	95.0	65.0	5.0	70.0	100.0
		Mean =	91.5	70.0	5.0	68.8	96.3
5 AUTHORITY FIRST DF	2.8 oz ai/a	A 201	90.0	60.0	5.0	60.0	65.0
MARVEL	2.72 oz ai/a	B 505	95.0	60.0	10.0	65.0	80.0
COC	1 % v/v	B 705	95.0	60.0	10.0	60.0	50.0
		905	99.0	20.0	10.0	75.0	75.0
		Mean =	94.8	50.0	8.8	65.0	67.5
6 AUTHORITY FIRST DF	2.8 oz ai/a	A 202	90.0	85.0	5.0	20.0	90.0
CADET	0.9 oz ai/a	B 501	85.0	20.0	0.0	50.0	90.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 802	70.0	75.0	5.0	50.0	90.0
AMS - Liquid	8.5 lb ai/100 gal	B 1005	95.0	45.0	5.0	60.0	100.0
		Mean =	85.0	56.3	3.8	45.0	92.5

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed	W Weed		
Pest Code	SETFA	AMBTR		AMBTR	SETFA	AMBTR	SETFA		
Pest Scientific Name	Setaria faberi	Ambrosia trifi>		Ambrosia trifi>	Setaria faberi	Ambrosia trifi>	Setaria faberi		
Pest Name	Giant foxtail	Giant ragweed		Giant ragweed	Giant foxtail	Giant ragweed	Giant foxtail		
Crop Code			GLXMA						
BBCH Scale			BSOY						
Crop Scientific Name			Glycine max						
Crop Name			Soybean						
Rating Date	Jun-14-2013	Jun-14-2013	Jun-19-2013	Jun-19-2013	Jun-19-2013	Jun-26-2013	Jun-26-2013		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V3	V3	V4						
Pest Stage Majority	3 IN	7 IN							
Pest Density, Unit	25 FT2	8 YD2							
Assessed By	MW	MW	Jl	Jl	Jl	Jl	Jl		
Days After First/Last Applic.	36 36	36 36	41 5	41 5	41 5	48 12	48 12		
Plant-Eval Interval	29 DP-1	29 DP-1	34 DP-1	34 DP-1	34 DP-1	41 DP-1	41 DP-1		
Days After Emergence	23 DE-1	23 DE-1	28 DE-1	28 DE-1	28 DE-1	35 DE-1	35 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code Plot	7	8	9	10	11	12	13
7 AUTHORITY FIRST DF	2.8 oz ai/a	A 204	99.0	80.0	5.0	75.0	95.0	80.0	100.0
MARVEL	2.72 oz ai/a	B 401	70.0	50.0	5.0	50.0	90.0	85.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 601	70.0	40.0	5.0	65.0	80.0	90.0	100.0
AMS - Liquid	8.5 lb ai/100 gal	B 902	85.0	65.0	5.0	50.0	75.0	85.0	100.0
		Mean =	81.0	58.8	5.0	60.0	85.0	85.0	100.0
8 AUTHORITY MTZ	7.2 oz ai/a	A 205	97.0	30.0	5.0	35.0	100.0	60.0	100.0
CADET	0.102 oz ai/a	B 305	95.0	60.0	5.0	35.0	100.0	60.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 604	99.0	70.0	5.0	60.0	90.0	80.0	100.0
AMS - Liquid	8.5 lb ai/100 gal	B 1004	90.0	70.0	5.0	50.0	95.0	85.0	100.0
		Mean =	95.3	57.5	5.0	45.0	96.3	71.3	100.0
9 AUTHORITY MTZ	7.2 oz ai/a	A 301	85.0	10.0	5.0	65.0	85.0	80.0	100.0
MARVEL	2.72 oz ai/a	B 304	93.0	75.0	5.0	85.0	100.0	75.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 701	80.0	50.0	5.0	85.0	100.0	95.0	95.0
AMS - Liquid	8.5 lb ai/100 gal	B 1001	80.0	20.0	5.0	80.0	100.0	80.0	100.0
		Mean =	84.5	38.8	5.0	78.8	96.3	82.5	98.8
10 VALOR SX	1.02 oz ai/a	A 302	95.0	90.0	5.0	90.0	100.0	100.0	100.0
COBRA	3 oz ai/a	B 504	99.0	85.0	15.0	95.0	100.0	95.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 801	80.0	45.0	5.0	85.0	100.0	95.0	100.0
AMS - Liquid	8.5 lb ai/100 gal	B 1002	85.0	80.0	10.0	95.0	100.0	95.0	100.0
		Mean =	89.8	75.0	8.8	91.3	100.0	96.3	100.0
11 Valor SX (51 WG)	0.9 oz ai/a	A 103	40.0	50.0	5.0	80.0	90.0	95.0	100.0
Classic	0.309 oz ai/a	A 303	93.0	90.0	10.0	95.0	100.0	85.0	100.0
COBRA	3 oz ai/a	B 603	93.0	80.0	20.0	95.0	100.0	100.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 803	70.0	30.0	10.0	90.0	90.0	95.0	100.0
AMS - Liquid	8.5 lb ai/100 gal	B							
		Mean =	74.0	62.5	11.3	90.0	95.0	93.8	100.0
12 COMMAND 3ME	0.75 lb ai/a	A 203	97.0	85.0	10.0	70.0	90.0	70.0	100.0
MARVEL	2.72 oz ai/a	B 403	99.0	65.0	10.0	80.0	100.0	85.0	100.0
ROUNDUP POWERMAX	0.77 lb ae/a	B 703	99.0	75.0	10.0	80.0	100.0	85.0	100.0
AMS - Liquid	8.5 lb ai/100 gal	B 903	99.0	70.0	5.0	70.0	100.0	80.0	100.0
		Mean =	98.5	73.8	8.8	75.0	97.5	80.0	100.0

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Pest Type				W Weed	W Weed		
Pest Code				SETFA	AMBTR		
Pest Scientific Name				Setaria faberi	Ambrosia trifi>		
Pest Name				Giant foxtail	Giant ragweed		
Crop Code						GLXMA	GLXMA
BBCH Scale						BSOY	BSOY
Crop Scientific Name						Glycine max	Glycine max
Crop Name						Soybean	Soybean
Rating Date				Jul-12-2013	Jul-12-2013	Jul-12-2013	Sep-24-2013
Rating Type				CONTRO	CONTRO	PHYSTU	YIELD
Rating Unit				%	%	%	bu/ac
Number of Subsamples				1	1	1	1
Crop Stage Majority				R1	R1	R1	
Pest Stage Majority				34 IN	63 IN		
Pest Density, Unit				20 FT2	8 YD2		
Assessed By				MW	MW	MW	
Days After First/Last Applic.				64 28	64 28	64 28	138 102
Plant-Eval Interval				57 DP-1	57 DP-1	57 DP-1	131 DP-1
Days After Emergence				51 DE-1	51 DE-1	51 DE-1	125 DE-1
Trt	Treatment	Rate	Appl				
No.	Name	Rate Unit	Code Plot	14	15	16	17
1	UNTREATED		101	0.0	0.0	0.0	0.70
			405	0.0	0.0	0.0	0.20
			702	0.0	0.0	0.0	35.90
			805	0.0	0.0	0.0	44.70
			Mean =	0.0	0.0	0.0	20.38
2	AUTHORITY XL	2.8 oz ai/a	A 102	97.0	80.0	0.0	66.20
	MARVEL	2.72 oz ai/a	B 404	80.0	30.0	0.0	67.52*
	COC	1 % v/v	B 602	95.0	55.0	5.0	76.60
			804	40.0	20.0	0.0	64.90
			Mean =	78.0	46.3	1.3	68.81
3	AUTHORITY XL	2.8 oz ai/a	A 104	93.0	85.0	3.0	70.80
	CADET	0.102 oz ai/a	B 502	97.0	95.0	3.0	91.00
	ROUNDUP POWERMAX	0.77 lb ae/a	B 704	99.0	85.0	0.0	82.50
	AMS - Liquid	8.5 lb ai/100 gal	B 901	99.0	87.0	0.0	92.30
			Mean =	97.0	88.0	1.5	84.15
4	AUTHORITY XL	2.8 oz ai/a	A 105	95.0	85.0	3.0	69.30
	MARVEL	2.72 oz ai/a	B 402	95.0	90.0	0.0	89.40
	ROUNDUP POWERMAX	0.77 lb ae/a	B 605	99.0	85.0	7.0	91.30
	AMS - Liquid	8.5 lb ai/100 gal	B 904	99.0	87.0	5.0	85.30
			Mean =	97.0	86.8	3.8	83.83
5	AUTHORITY FIRST DF	2.8 oz ai/a	A 201	99.0	65.0	0.0	65.70
	MARVEL	2.72 oz ai/a	B 505	99.0	50.0	0.0	60.60
	COC	1 % v/v	B 705	99.0	20.0	0.0	58.70
			905	99.0	20.0	0.0	63.10
			Mean =	99.0	38.8	0.0	62.03
6	AUTHORITY FIRST DF	2.8 oz ai/a	A 202	99.0	87.0	0.0	81.90
	CADET	0.9 oz ai/a	B 501	90.0	75.0	3.0	79.70
	ROUNDUP POWERMAX	0.77 lb ae/a	B 802	95.0	85.0	3.0	96.40
	AMS - Liquid	8.5 lb ai/100 gal	B 1005	99.0	83.0	3.0	94.40
			Mean =	95.8	82.5	2.3	88.10

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Pest Type	W Weed	W Weed						
Pest Code	SETFA	AMBTR						
Pest Scientific Name	Setaria faberi	Ambrosia trifida						
Pest Name	Giant foxtail	Giant ragweed						
Crop Code			GLXMA	GLXMA				
BBCH Scale			BSOY	BSOY				
Crop Scientific Name			Glycine max	Glycine max				
Crop Name			Soybean	Soybean				
Rating Date	Jul-12-2013	Jul-12-2013	Jul-12-2013	Sep-24-2013				
Rating Type	CONTRO	CONTRO	PHYSTU	YIELD				
Rating Unit	%	%	%	bu/ac				
Number of Subsamples	1	1	1	1				
Crop Stage Majority	R1	R1	R1					
Pest Stage Majority	34 IN	63 IN						
Pest Density, Unit	20 FT2	8 YD2						
Assessed By	MW	MW	MW					
Days After First/Last Applic.	64 28	64 28	64 28	138 102				
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	131 DP-1				
Days After Emergence	51 DE-1	51 DE-1	51 DE-1	125 DE-1				
Trt No.	Treatment	Rate	Appl Code	Plot	14	15	16	17
7	AUTHORITY FIRST DF	2.8 oz ai/a	A	204	99.0	90.0	0.0	70.00
	MARVEL	2.72 oz ai/a	B	401	95.0	87.0	0.0	97.40
	ROUNDUP POWERMAX	0.77 lb ae/a	B	601	95.0	93.0	3.0	95.90
	AMS - Liquid	8.5 lb ai/100 gal	B	902	99.0	90.0	3.0	88.20
				Mean =	97.0	90.0	1.5	87.88
8	AUTHORITY MTZ	7.2 oz ai/a	A	205	99.0	75.0	0.0	70.10
	CADET	0.102 oz ai/a	B	305	99.0	85.0	0.0	85.30
	ROUNDUP POWERMAX	0.77 lb ae/a	B	604	99.0	83.0	7.0	88.30
	AMS - Liquid	8.5 lb ai/100 gal	B	1004	99.0	83.0	3.0	92.00
				Mean =	99.0	81.5	2.5	83.93
9	AUTHORITY MTZ	7.2 oz ai/a	A	301	97.0	83.0	3.0	67.80
	MARVEL	2.72 oz ai/a	B	304	99.0	87.0	0.0	78.50
	ROUNDUP POWERMAX	0.77 lb ae/a	B	701	97.0	95.0	0.0	82.60
	AMS - Liquid	8.5 lb ai/100 gal	B	1001	99.0	87.0	0.0	99.90
				Mean =	98.0	88.0	0.8	82.20
10	VALOR SX	1.02 oz ai/a	A	302	95.0	97.0	0.0	78.70
	COBRA	3 oz ai/a	B	504	97.0	93.0	3.0	79.00
	ROUNDUP POWERMAX	0.77 lb ae/a	B	801	97.0	93.0	0.0	96.70
	AMS - Liquid	8.5 lb ai/100 gal	B	1002	95.0	95.0	0.0	89.60
				Mean =	96.0	94.5	0.8	86.00
11	Valor SX (51 WG)	0.9 oz ai/a	A	103	90.0	85.0	5.0	69.40
	Classic	0.309 oz ai/a	A	303	97.0	95.0	0.0	79.60
	COBRA	3 oz ai/a	B	603	90.0	85.0	7.0	81.70
	ROUNDUP POWERMAX	0.77 lb ae/a	B	803	90.0	77.0	7.0	100.50
	AMS - Liquid	8.5 lb ai/100 gal	B					
				Mean =	91.8	85.5	4.8	82.80
12	COMMAND 3ME	0.75 lb ai/a	A	203	99.0	87.0	0.0	63.30
	MARVEL	2.72 oz ai/a	B	403	99.0	90.0	0.0	89.00
	ROUNDUP POWERMAX	0.77 lb ae/a	B	703	99.0	85.0	0.0	85.00
	AMS - Liquid	8.5 lb ai/100 gal	B	903	99.0	85.0	0.0	92.80
				Mean =	99.0	86.8	0.0	82.53

Purdue University

2013/SOYBEAN/AUTHORITY/MARVEL/PRE/POST/PROGRAM/PURDUE

Trial ID: 13S-THP-CTS-43 Protocol ID: 13S-THP-CTS-43
 Location: Throckmorton Study Director:
 Project ID: SULF.SOY.13.JPR.06 (b) Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US
 AMBTR, Ambrosia trifida, = US
 CHEAL, Chenopodium album, = US
 SETSS, Setaria sp., = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown
 PHYGEN = phytotoxicity - general / injury
 PHYSTU = phytotoxicity - stunting
 YIELD = yield

Rating Unit

% = percent
 bu/ac = bushels per acre

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

14 DP-1 = 1 GLXMA May-16-2013
 20 DP-1 = 1 GLXMA May-16-2013
 29 DP-1 = 1 GLXMA May-16-2013
 34 DP-1 = 1 GLXMA May-16-2013
 41 DP-1 = 1 GLXMA May-16-2013
 57 DP-1 = 1 GLXMA May-16-2013
 131 DP-1 = 1 GLXMA May-16-2013

Purdue University

2013/SOYBEAN/AUTHORITY/MARVEL/PRE/POST/PROGRAM/PURDUE

Trial ID: 13S-THP-CTS-43 Protocol ID: 13S-THP-CTS-43
 Location: Throckmorton Study Director:
 Project ID: SULF.SOY.13.JPR.06 (b) Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL		SETSS	AMBTR	SETFA
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>		Setaria sp.	Ambrosia trifi>	Setaria faberi
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>		Foxtail millet	Giant ragweed	Giant foxtail
Crop Code				GLXMA			
BBCH Scale				BSOY			
Crop Scientific Name				Glycine max			
Crop Name				Soybean			
Rating Date	May-30-2013	May-30-2013	May-30-2013	Jun-5-2013	Jun-5-2013	Jun-5-2013	Jun-14-2013
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority	V1	V1	V1				V3
Pest Stage Majority							3 IN
Pest Density, Unit							25 FT2
Assessed By	BM/GT	BM/GT	BM/GT	JH	JH	JH	MW
Days After First/Last Applic.	21 21	21 21	21 21	27 27	27 27	27 27	36 36
Plant-Eval Interval	14 DP-1	14 DP-1	14 DP-1	20 DP-1	20 DP-1	20 DP-1	29 DP-1
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	14 DE-1	14 DE-1	14 DE-1	23 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2	3	4	5
1 UNTREATED			0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2 AUTHORITY XL	2.8 oz ai/a	A	96.5 a	91.3 a	99.0 a	0.0 b	82.5 a
MARVEL	2.72 oz ai/a	B					65.0 a
COC	1 % v/v	B					86.3 a
3 AUTHORITY XL	2.8 oz ai/a	A	92.3 a	93.8 a	99.0 a	0.0 b	58.8 a
CADET	0.102 oz ai/a	B					55.0 a
ROUNDUP POWERMAX	0.77 lb ae/a	B					75.0 a
AMS - Liquid	8.5 lb ai/100 gal	B					
4 AUTHORITY XL	2.8 oz ai/a	A	97.0 a	91.3 a	99.0 a	0.0 b	93.8 a
MARVEL	2.72 oz ai/a	B					63.8 a
ROUNDUP POWERMAX	0.77 lb ae/a	B					91.5 a
AMS - Liquid	8.5 lb ai/100 gal	B					
5 AUTHORITY FIRST DF	2.8 oz ai/a	A	97.0 a	90.0 a	98.5 a	0.0 b	95.0 a
MARVEL	2.72 oz ai/a	B					62.5 a
COC	1 % v/v	B					94.8 a
6 AUTHORITY FIRST DF	2.8 oz ai/a	A	94.8 a	89.3 a	99.0 a	0.0 b	75.0 a
CADET	0.9 oz ai/a	B					48.8 a
ROUNDUP POWERMAX	0.77 lb ae/a	B					85.0 a
AMS - Liquid	8.5 lb ai/100 gal	B					
7 AUTHORITY FIRST DF	2.8 oz ai/a	A	96.0 a	88.8 a	99.0 a	0.0 b	62.5 a
MARVEL	2.72 oz ai/a	B					52.5 a
ROUNDUP POWERMAX	0.77 lb ae/a	B					81.0 a
AMS - Liquid	8.5 lb ai/100 gal	B					
8 AUTHORITY MTZ	7.2 oz ai/a	A	97.5 a	90.0 a	99.0 a	0.0 b	96.3 a
CADET	0.102 oz ai/a	B					56.3 a
ROUNDUP POWERMAX	0.77 lb ae/a	B					95.3 a
AMS - Liquid	8.5 lb ai/100 gal	B					
9 AUTHORITY MTZ	7.2 oz ai/a	A	93.0 a	88.8 a	99.0 a	0.0 b	80.0 a
MARVEL	2.72 oz ai/a	B					31.3 a
ROUNDUP POWERMAX	0.77 lb ae/a	B					84.5 a
AMS - Liquid	8.5 lb ai/100 gal	B					

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			
	SETFA	AMBTR	CHEAL	GLXMA	SETSS	AMBTR	SETFA		
Pest Code									
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>		Setaria sp.	Ambrosia trifi>	Setaria faberi		
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>		Foxtail millet	Giant ragweed	Giant foxtail		
Crop Code				GLXMA					
BBCH Scale				BSOY					
Crop Scientific Name				Glycine max					
Crop Name				Soybean					
Rating Date	May-30-2013	May-30-2013	May-30-2013	Jun-5-2013	Jun-5-2013	Jun-5-2013	Jun-14-2013		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1						
Pest Stage Majority							V3		
Pest Density, Unit							3 IN		
Assessed By							25 FT2		
Days After First/Last Applic.							MW		
Plant-Eval Interval	21 21	21 21	21 21	27 27	27 27	27 27	36 36		
Days After Emergence	14 DP-1	14 DP-1	14 DP-1	20 DP-1	20 DP-1	20 DP-1	29 DP-1		
	8 DE-1	8 DE-1	8 DE-1	14 DE-1	14 DE-1	14 DE-1	23 DE-1		
Trt Treatment	Rate	Appl	1	2	3	4	5	6	7
No. Name	Rate Unit	Code							
10 VALOR SX	1.02 oz ai/a	A	95.8 a	91.5 a	99.0 a	3.8 a	87.5 a	75.0 a	89.8 a
COBRA	3 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
11 Valor SX (51 WG)	0.9 oz ai/a	A	95.3 a	93.5 a	99.0 a	3.8 a	72.5 a	71.3 a	74.0 a
Classic	0.309 oz ai/a	A							
COBRA	3 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
12 COMMAND 3ME	0.75 lb ai/a	A	99.0 a	94.8 a	99.0 a	0.0 b	100.0 a	38.8 a	98.5 a
MARVEL	2.72 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
LSD (P=.05)			4.61	9.00	0.42	1.50	28.17	29.24	16.70
Standard Deviation			3.19	6.23	0.29	1.04	19.51	20.25	11.56
CV			3.64	7.46	0.32	165.76	25.91	39.2	14.52
Bartlett's X2			12.76	12.788	0.0	0.0	18.123	12.597	33.62
P(Bartlett's X2)			0.12	0.236	.	.	0.034*	0.247	0.001*
Replicate F			0.147	1.064	1.000	0.647	0.301	0.958	0.307
Replicate Prob(F)			0.9308	0.3778	0.4051	0.5904	0.8248	0.4239	0.8203
Treatment F			301.495	71.743	39169.004	7.941	7.752	4.135	20.570
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001	0.0001	0.0007	0.0001

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Pest Type	W Weed		W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR		AMBTR	SETFA	AMBTR	SETFA	SETFA		
Pest Scientific Name	Ambrosia trifi>		Ambrosia trifi>	Setaria faberi	Ambrosia trifi>	Setaria faberi	Setaria faberi		
Pest Name	Giant ragweed		Giant ragweed	Giant foxtail	Giant ragweed	Giant foxtail	Giant foxtail		
Crop Code		GLXMA							
BBCB Scale		BSOY							
Crop Scientific Name		Glycine max							
Crop Name		Soybean							
Rating Date	Jun-14-2013	Jun-19-2013	Jun-19-2013	Jun-19-2013	Jun-26-2013	Jun-26-2013	Jul-12-2013		
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	V3	V4					R1		
Pest Stage Majority	7 IN						34 IN		
Pest Density, Unit	8 YD2						20 FT2		
Assessed By	MW	Jl	Jl	Jl	Jl	Jl	MW		
Days After First/Last Applic.	36 36	41 5	41 5	41 5	48 12	48 12	64 28		
Plant-Eval Interval	29 DP-1	34 DP-1	34 DP-1	34 DP-1	41 DP-1	41 DP-1	57 DP-1		
Days After Emergence	23 DE-1	28 DE-1	28 DE-1	28 DE-1	35 DE-1	35 DE-1	51 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	8	9	10	11	12	13	14
1 UNTREATED			0.0 b	0.0 c	0.0 f	0.0 d	0.0 c	0.0 c	0.0 c
2 AUTHORITY XL	2.8 oz ai/a	A	62.5 a	5.0 abc	55.0 cde	78.8 bc	41.3 b	95.0 a	78.0 b
MARVEL	2.72 oz ai/a	B							
COC	1 % v/v	B							
3 AUTHORITY XL	2.8 oz ai/a	A	60.0 a	2.5 bc	40.0 e	81.3 abc	73.8 a	100.0 a	97.0 a
CADET	0.102 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
4 AUTHORITY XL	2.8 oz ai/a	A	70.0 a	5.0 abc	68.8 bc	96.3 ab	83.8 a	100.0 a	97.0 a
MARVEL	2.72 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
5 AUTHORITY FIRST DF	2.8 oz ai/a	A	50.0 a	8.8 ab	65.0 bc	67.5 c	42.5 b	77.5 b	99.0 a
MARVEL	2.72 oz ai/a	B							
COC	1 % v/v	B							
6 AUTHORITY FIRST DF	2.8 oz ai/a	A	56.3 a	3.8 bc	45.0 de	92.5 ab	78.8 a	100.0 a	95.8 a
CADET	0.9 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
7 AUTHORITY FIRST DF	2.8 oz ai/a	A	58.8 a	5.0 abc	60.0 bcd	85.0 ab	85.0 a	100.0 a	97.0 a
MARVEL	2.72 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
8 AUTHORITY MTZ	7.2 oz ai/a	A	57.5 a	5.0 abc	45.0 de	96.3 ab	71.3 a	100.0 a	99.0 a
CADET	0.102 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							
9 AUTHORITY MTZ	7.2 oz ai/a	A	38.8 a	5.0 abc	78.8 ab	96.3 ab	82.5 a	98.8 a	98.0 a
MARVEL	2.72 oz ai/a	B							
ROUNDUP POWERMAX	0.77 lb ae/a	B							
AMS - Liquid	8.5 lb ai/100 gal	B							

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Pest Type				W Weed		
Pest Code				AMBTR		
Pest Scientific Name				Ambrosia trifi>		
Pest Name				Giant ragweed		
Crop Code					GLXMA	GLXMA
BBCB Scale					BSOY	BSOY
Crop Scientific Name					Glycine max	Glycine max
Crop Name					Soybean	Soybean
Rating Date				Jul-12-2013	Jul-12-2013	Sep-24-2013
Rating Type				CONTRO	PHYSTU	YIELD
Rating Unit				%	%	bu/ac
Number of Subsamples				1	1	1
Crop Stage Majority				R1	R1	
Pest Stage Majority				63 IN		
Pest Density, Unit				8 YD2		
Assessed By				MW	MW	
Days After First/Last Applic.				64 28	64 28	138 102
Plant-Eval Interval				57 DP-1	57 DP-1	131 DP-1
Days After Emergence				51 DE-1	51 DE-1	125 DE-1
Trt No.	Treatment Name	Rate	Appl Code	15	16	17
		Unit				
1	UNTREATED			0.0 c	0.0 a	20.38 c
2	AUTHORITY XL	2.8 oz ai/a	A	46.3 b	1.3 a	68.81 ab
	MARVEL	2.72 oz ai/a	B			
	COC	1 % v/v	B			
3	AUTHORITY XL	2.8 oz ai/a	A	88.0 a	1.5 a	84.15 a
	CADET	0.102 oz ai/a	B			
	ROUNDUP POWERMAX	0.77 lb ae/a	B			
	AMS - Liquid	8.5 lb ai/100 gal	B			
4	AUTHORITY XL	2.8 oz ai/a	A	86.8 a	3.8 a	83.83 a
	MARVEL	2.72 oz ai/a	B			
	ROUNDUP POWERMAX	0.77 lb ae/a	B			
	AMS - Liquid	8.5 lb ai/100 gal	B			
5	AUTHORITY FIRST DF	2.8 oz ai/a	A	38.8 b	0.0 a	62.03 b
	MARVEL	2.72 oz ai/a	B			
	COC	1 % v/v	B			
6	AUTHORITY FIRST DF	2.8 oz ai/a	A	82.5 a	2.3 a	88.10 a
	CADET	0.9 oz ai/a	B			
	ROUNDUP POWERMAX	0.77 lb ae/a	B			
	AMS - Liquid	8.5 lb ai/100 gal	B			
7	AUTHORITY FIRST DF	2.8 oz ai/a	A	90.0 a	1.5 a	87.88 a
	MARVEL	2.72 oz ai/a	B			
	ROUNDUP POWERMAX	0.77 lb ae/a	B			
	AMS - Liquid	8.5 lb ai/100 gal	B			
8	AUTHORITY MTZ	7.2 oz ai/a	A	81.5 a	2.5 a	83.93 a
	CADET	0.102 oz ai/a	B			
	ROUNDUP POWERMAX	0.77 lb ae/a	B			
	AMS - Liquid	8.5 lb ai/100 gal	B			
9	AUTHORITY MTZ	7.2 oz ai/a	A	88.0 a	0.8 a	82.20 a
	MARVEL	2.72 oz ai/a	B			
	ROUNDUP POWERMAX	0.77 lb ae/a	B			
	AMS - Liquid	8.5 lb ai/100 gal	B			

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Pest Type	W Weed		
Pest Code	AMBTR		
Pest Scientific Name	Ambrosia trifi>		
Pest Name	Giant ragweed		
Crop Code	GLXMA	GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	Jul-12-2013	Jul-12-2013	Sep-24-2013
Rating Type	CONTRO	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Number of Subsamples	1	1	1
Crop Stage Majority	R1	R1	
Pest Stage Majority	63 IN		
Pest Density, Unit	8 YD2		
Assessed By	MW	MW	
Days After First/Last Applic.	64 28	64 28	138 102
Plant-Eval Interval	57 DP-1	57 DP-1	131 DP-1
Days After Emergence	51 DE-1	51 DE-1	125 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			15 16 17
10 VALOR SX	1.02 oz ai/a	A	94.5 a 0.8 a 86.00 a
COBRA	3 oz ai/a	B	
ROUNDUP POWERMAX	0.77 lb ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
11 Valor SX (51 WG)	0.9 oz ai/a	A	85.5 a 4.8 a 82.80 a
Classic	0.309 oz ai/a	A	
COBRA	3 oz ai/a	B	
ROUNDUP POWERMAX	0.77 lb ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
12 COMMAND 3ME	0.75 lb ai/a	A	86.8 a 0.0 a 82.53 a
MARVEL	2.72 oz ai/a	B	
ROUNDUP POWERMAX	0.77 lb ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
LSD (P=.05)	15.35	2.81	12.578
Standard Deviation	10.63	1.94	8.711
CV	14.69	122.76	11.45
Bartlett's X2	47.19	5.445	11.385
P(Bartlett's X2)	0.001*	0.709	0.412
Replicate F	1.379	2.191	11.714
Replicate Prob(F)	0.2663	0.1076	0.0001
Treatment F	29.302	2.410	19.390
Treatment Prob(F)	0.0001	0.0251	0.0001

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2013/SOYBEAN/AUTHORITY/MARVEL/PRE/POST/PROGRAM/PURDUE

Trial ID: 13S-THP-CTS-43 Protocol ID: 13S-THP-CTS-43
 Location: Throckmorton Study Director:
 Project ID: SULF.SOY.13.JPR.06 (b) Investigator: Dr. Bill Johnson
 Sponsor Contact: FMC - Joe Reed

Pest Type

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

Pest Code

SETFA, Setaria faberi, = US
 AMBTR, Ambrosia trifida, = US
 CHEAL, Chenopodium album, = US
 SETSS, Setaria sp., = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown
 PHYGEN = phytotoxicity - general / injury
 PHYSTU = phytotoxicity - stunting
 YIELD = yield

Rating Unit

% = percent
 bu/ac = bushels per acre

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

14 DP-1 = 1 GLXMA May-16-2013
 20 DP-1 = 1 GLXMA May-16-2013
 29 DP-1 = 1 GLXMA May-16-2013
 34 DP-1 = 1 GLXMA May-16-2013
 41 DP-1 = 1 GLXMA May-16-2013
 57 DP-1 = 1 GLXMA May-16-2013
 131 DP-1 = 1 GLXMA May-16-2013