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EFFECT OF WEED COMPETITION ON SOYBEAN YIELD

Trial ID: 13S-THP-CTS-44 Protocol ID: 13S-THP-CTS-44
 Location: Throckmorton Study Director:
 Project ID: VUSA2013FIERCCEMD64.01 Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

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

Objectives:

To demonstrate the ability of a preemergence application of Valor (2.0 oz/A), Valor XLT (3 oz/A) and Fierce (3 and 3.75 oz/A) to protect soybean yield potential. Measure of success is yield comparison to postemergence program of two glyphosate applications. All treatments are core.

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

Crop Description

Crop 1: GLXM02 Glycine max GMO Soybean, Roundup Ready
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

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

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Plot Width, Unit: 10 FT		Site Type: FIELD field	
Plot Length, Unit: 30 FT		Experimental Unit: 1 PLOT plot	
Plot Area, Unit: 300 FT ²		Tillage Type: CONTIL conventional-till	
Replications: 5		Study Design: RACOBL Randomized Complete Block (RCB)	
Untreated Arrangement: INCLUDED single control randomized in each block			

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	C
Application Date:	May-16-2013	Jun-11-2013	Jun-24-2013
Time of Day:	AM	8 AM	8 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREE	EAPOCR	POST
Application Placement:	SOIL	FOLIAR	FOLIAR
Applied By:	MW	MW	MW
Air Temperature, Unit:	68 F	71 F	73 F
% Relative Humidity:	73	71	79
Wind Velocity, Unit:	3 MPH	1.6 MPH	2.8 MPH
Wind Direction:	E	SW	SW
Dew Presence (Y/N):	Y yes	Y yes	Y yes
Soil Temperature, Unit:	68 F	70 F	69 F
Soil Moisture:	SLIWET	SLIWET	DRY
% Cloud Cover:	80	10	95

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	GLXM0 BSOY	GLXM0 BSOY	GLXM0 BSOY
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		V2	V5

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Height Minimum, Maximum:		1 3	1 13
Density, Unit:		20 YD2	10 FT2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Height Minimum, Maximum:		1 5	8 30
Density, Unit:		11 YD2	10 YD2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Height Minimum, Maximum:		1 4	1 16
Density, Unit:		15 FT2	18 FT2

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Application Equipment

	A	B	C
Appl. Equipment:	CO2 FORD	CO2 FORD	CO2 FORD
Equipment Type:	SPTRMO	SPTRMO	SPTRMO
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	XR 100 02	XR 100 02	XR 100 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	20 IN	20 IN
Ground Speed, Unit:	2.1 MPH	2.1 MPH	2.1 MPH
Carrier:	MEIGS	MEIGS	MEIGS
Spray Volume, Unit:	20 gal/ac	20 gal/ac	20 gal/ac
Mix Size, Unit:	2.5 liters	2.5 liters	2.5 liters
Propellant:	CO2	CO2	CO2

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EFFECT OF WEED COMPETITION ON SOYBEAN YIELD

Trial ID: 13S-THP-CTS-44 Protocol ID: 13S-THP-CTS-44
 Location: Throckmorton Study Director:
 Project ID: VUSA2013FIERCEMD64.01 Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

Reps: 5 Plots: 10 by 30 feet
 Spray vol: 20 gal/ac Mix size: 3 liters (min 2.607)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit	Stage	Appl Code	Appl Description	Spray Volume	Volume Unit	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	Untreated Check														101	403	604	703
2	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				EAPOCR B	28 DAP	20 GAL/AC		37.66 ml/mx	102	302	502	701
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				EAPOCR B	28 DAP	20 GAL/AC		110.3 ml/mx				
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				
3	VALOR SX	51 %W/W	WG		1.02 oz ai/a	2 oz wt/a				PREE A		15 GAL/AC		2.996 g/mx	103	404	601	801
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				
4	Valor SX (51 WG)	51 %	WG		0.9 oz ai/a	1.76 oz wt/a				PREE A		15 GAL/AC		2.643 g/mx	104	304	602	802
	Classic	25 %AW/W	DF		0.309 oz ai/a	1.24 oz wt/a				PREE A				1.388 g/mx				
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				
5	FIERCE	76 %W/W	WG		2.28 oz ai/a	3 oz wt/a				PREE A		15 GAL/AC		4.493 g/mx	201	401	603	704
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				
6	FIERCE	76 %W/W	WG		2.85 oz ai/a	3.75 oz wt/a				PREE A		15 GAL/AC		5.617 g/mx	202	303	503	803
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				
7	AUTHORITY ASSIST	4 LBA/GAL	SC		2.5 oz ai/a	5 fl oz/a				PREE A		15 GAL/AC		7.812 ml/mx	203	402	501	702
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				
8	PREFIX	5.28 LBA/GAL	EW		1.32 lb ai/a	1 qt/a				PREE A		15 GAL/AC		49.99 ml/mx	204	301	504	804
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx				

Sort Order: Treatment

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Reps: 5
Spray vol: 20 gal/ac

Plots: 10 by 30 feet
Mix size: 3 liters (min 2.607)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit	Stage	Appl Code	Appl Description	Spray Volume	Volume Unit	Amt Product to Measure	5
1	Untreated Check														1001
2	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				EAPOCR B	28 DAP	20 GAL/AC		37.66 ml/mx	904
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				EAPOCR B	28 DAP	20 GAL/AC		110.3 ml/mx	
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	
3	VALOR SX	51 %W/W	WG		1.02 oz ai/a	2 oz wt/a				PREE A		15 GAL/AC		2.996 g/mx	902
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	
4	Valor SX (51 WG)	51 %	WG		0.9 oz ai/a	1.76 oz wt/a				PREE A		15 GAL/AC		2.643 g/mx	1003
	Classic	25 %AW/W	DF		0.309 oz ai/a	1.24 oz wt/a				PREE A				1.388 g/mx	
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	
5	FIERCE	76 %W/W	WG		2.28 oz ai/a	3 oz wt/a				PREE A		15 GAL/AC		4.493 g/mx	903
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	
6	FIERCE	76 %W/W	WG		2.85 oz ai/a	3.75 oz wt/a				PREE A		15 GAL/AC		5.617 g/mx	901
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	
7	AUTHORITY ASSIST	4 LBA/GAL	SC		2.5 oz ai/a	5 fl oz/a				PREE A		15 GAL/AC		7.812 ml/mx	1002
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	
8	PREFIX	5.28 LBA/GAL	EW		1.32 lb ai/a	1 qt/a				PREE A		15 GAL/AC		49.99 ml/mx	1004
	ROUNDUP PWR MAX(AE)	4.5 LBAE/GAL	SL		1.13 lb ae/a	32 fl oz/a				POST C	42 DAP	20 GAL/AC		37.66 ml/mx	
	AMS - Liquid	3.4 LB/GAL	SL		2.5 lb ai/a	2.5 lb ai/a				POST C	42 DAP	20 GAL/AC		110.3 ml/mx	

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EFFECT OF WEED COMPETITION ON SOYBEAN YIELD

Trial ID: 13S-THP-CTS-44 Protocol ID: 13S-THP-CTS-44
 Location: Throckmorton Study Director:
 Project ID: VUSA2013FIERCCEMD64.01 Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	SETFA	AMBTR	CHEAL	SETFA	AMBTR	CHEAL				
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Chenopodium al>				
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Giant foxtail	Giant ragweed	Common lambsqu>				
Crop Code										
BBCH Scale										
Crop Scientific Name										
Crop Name										
Part Rated	- P	- P	- P	- P	- P	- P				
Rating Date	Jun-24-2013	Jun-24-2013	Jun-24-2013	Jul-10-2013	Jul-10-2013	Jul-10-2013				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONPRE				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
Pest Stage Majority	1-13 IN	8-30 IN	1-16 IN	4-36 IN	18-48 IN	12-30 IN				
Pest Density, Unit	10 FT2	10 YD2	18 FT2	10 FT2	5 YD2	4 YD2				
Assessed By	MW	MW	MW	BM/GT	BM/GT	BM/GT				
Days After First/Last Applic.	39 13	39 13	39 13	55 16	55 16	55 16				
Plant-Eval Interval	39 DP-1	39 DP-1	39 DP-1	55 DP-1	55 DP-1	55 DP-1				
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	49 DE-1	49 DE-1	49 DE-1				
Trt Treatment	Rate	Appl								
No. Name	Rate	Unit	Code	Plot	1	2	3	4	5	6
1 Untreated Check				101	0.0	0.0	0.0	0.0	0.0	0.0
				403	0.0	0.0	0.0	0.0	0.0	0.0
				604	0.0	0.0	0.0	0.0	0.0	0.0
				703	0.0	0.0	0.0	0.0	0.0	0.0
				1001	0.0	0.0	0.0	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2 ROUNDUP PWR MAX(AE)	1.13 lb ae/a	B		102	95.0	90.0	95.0	95.0	95.0	99.0
AMS - Liquid	2.5 lb ai/a	B		302	95.0	95.0	99.0	95.0	99.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C		502	95.0	97.0	99.0	97.0	95.0	99.0
AMS - Liquid	2.5 lb ai/a	C		701	93.0	87.0	95.0	97.0	95.0	99.0
				904	93.0	95.0	99.0	97.0	99.0	99.0
				Mean =	94.2	92.8	97.4	96.2	96.6	99.0
3 VALOR SX	1.02 oz ai/a	A		103	95.0	80.0	99.0	99.0	97.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C		404	95.0	40.0	99.0	99.0	95.0	99.0
AMS - Liquid	2.5 lb ai/a	C		601	90.0	50.0	99.0	99.0	97.0	99.0
				801	87.0	25.0	99.0	99.0	97.0	99.0
				902	87.0	60.0	99.0	97.0	95.0	99.0
				Mean =	90.8	51.0	99.0	98.6	96.2	99.0
4 Valor SX (51 WG)	0.9 oz ai/a	A		104	75.0	70.0	99.0	99.0	99.0	99.0
Classic	0.309 oz ai/a	A		304	60.0	10.0	90.0	99.0	95.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C		602	80.0	25.0	99.0	99.0	97.0	99.0
AMS - Liquid	2.5 lb ai/a	C		802	90.0	20.0	99.0	99.0	95.0	99.0
				1003	70.0	80.0	99.0	99.0	99.0	99.0
				Mean =	75.0	41.0	97.2	99.0	97.0	99.0
5 FIERCE	2.28 oz ai/a	A		201	95.0	40.0	99.0	99.0	95.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C		401	99.0	80.0	99.0	99.0	99.0	99.0
AMS - Liquid	2.5 lb ai/a	C		603	95.0	85.0	99.0	99.0	99.0	99.0
				704	95.0	85.0	99.0	99.0	97.0	99.0
				903	99.0	85.0	99.0	99.0	97.0	99.0
				Mean =	96.6	75.0	99.0	99.0	97.4	99.0

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR	CHEAL	SETFA	AMBTR	CHEAL			
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Chenopodium al>			
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Giant foxtail	Giant ragweed	Common lambsqu>			
Crop Code									
BBCH Scale									
Crop Scientific Name									
Crop Name									
Part Rated	- P	- P	- P	- P	- P	- P			
Rating Date	Jun-24-2013	Jun-24-2013	Jun-24-2013	Jul-10-2013	Jul-10-2013	Jul-10-2013			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONPRE			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Pest Stage Majority	1-13 IN	8-30 IN	1-16 IN	4-36 IN	18-48 IN	12-30 IN			
Pest Density, Unit	10 FT2	10 YD2	18 FT2	10 FT2	5 YD2	4 YD2			
Assessed By	MW	MW	MW	BM/GT	BM/GT	BM/GT			
Days After First/Last Applic.	39 13	39 13	39 13	55 16	55 16	55 16			
Plant-Eval Interval	39 DP-1	39 DP-1	39 DP-1	55 DP-1	55 DP-1	55 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	49 DE-1	49 DE-1	49 DE-1			
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit Code	Plot	1	2	3	4	5	6
6 FIERCE	2.85 oz ai/a	A	202	95.0	30.0	99.0	99.0	95.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C	303	99.0	70.0	99.0	99.0	97.0	99.0
AMS - Liquid	2.5 lb ai/a	C	503	99.0	85.0	99.0	99.0	97.0	99.0
			803	95.0	10.0	99.0	99.0	95.0	99.0
			901	93.0	60.0	99.0	99.0	97.0	99.0
			Mean =	96.2	51.0	99.0	99.0	96.2	99.0
7 AUTHORITY ASSIST	2.5 oz ai/a	A	203	95.0	0.0	99.0	99.0	90.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C	402	99.0	0.0	99.0	99.0	97.0	99.0
AMS - Liquid	2.5 lb ai/a	C	501	90.0	20.0	99.0	99.0	97.0	99.0
			702	97.0	20.0	99.0	99.0	97.0	99.0
			1002	70.0	0.0	99.0	99.0	95.0	99.0
			Mean =	90.2	8.0	99.0	99.0	95.2	99.0
8 PREFIX	1.32 lb ai/a	A	204	99.0	80.0	97.0	99.0	99.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C	301	97.0	80.0	99.0	99.0	95.0	99.0
AMS - Liquid	2.5 lb ai/a	C	504	99.0	85.0	70.0	99.0	99.0	99.0
			804	99.0	85.0	99.0	99.0	99.0	99.0
			1004	95.0	60.0	70.0	99.0	95.0	97.0
			Mean =	97.8	78.0	87.0	99.0	97.4	98.6

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Pest Type		W Weed	W Weed
Pest Code		AMBTR	CHEAL
Pest Scientific Name		Ambrosia trifi>	Chenopodium al>
Pest Name		Giant ragweed	Common lambsqu>
Crop Code	GLXM02		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max GMO		
Crop Name	Soybean, Round>		
Part Rated	- C		
Rating Date	Sep-24-2013	Sep-23-2013	Sep-23-2013
Rating Type	YIELD	CONTRO	CONTRO
Rating Unit	BU/AC	%	%
Number of Subsamples	1	1	1
Pest Stage Majority		52 in	30 in
Pest Density, Unit		7 YD2	6 YD2
Assessed By			
Days After First/Last Applic.	131 92	130 91	130 91
Plant-Eval Interval	131 DP-1	130 DP-1	130 DP-1
Days After Emergence	125 DE-1	124 DE-1	124 DE-1
Trt Treatment	Rate Appl		
No. Name	Rate Unit Code Plot	7	8
			9
1 Untreated Check			
	101	1.90	0.0
	403	2.20	0.0
	604	25.50	0.0
	703	1.70	0.0
	1001	2.10	0.0
	Mean =	6.68	0.0
2 ROUNDUP PWR MAX(AE)	1.13 lb ae/a B	70.70	87.0
AMS - Liquid	2.5 lb ai/a B	92.30	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C	87.50	99.0
AMS - Liquid	2.5 lb ai/a C	85.70	95.0
	904	88.60	99.0
	Mean =	84.96	95.8
3 VALOR SX	1.02 oz ai/a A	84.20	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C	59.80	94.0
AMS - Liquid	2.5 lb ai/a C	98.80	98.0
	801	87.70	98.0
	902	67.30	80.0
	Mean =	79.56	93.8
4 Valor SX (51 WG)	0.9 oz ai/a A	82.00	90.0
Classic	0.309 oz ai/a A	67.00	98.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C	81.90	97.0
AMS - Liquid	2.5 lb ai/a C	79.30	98.0
	1003	88.70	99.0
	Mean =	79.78	96.4
5 FIERCE	2.28 oz ai/a A	79.20	90.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C	72.50	99.0
AMS - Liquid	2.5 lb ai/a C	94.60	99.0
	704	96.10	98.0
	903	83.60	99.0
	Mean =	85.20	97.0

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Pest Type		W Weed	W Weed	
Pest Code		AMBTR	CHEAL	
Pest Scientific Name		Ambrosia trifi>	Chenopodium al>	
Pest Name		Giant ragweed	Common lambsqu>	
Crop Code	GLXM02			
BBCH Scale	BSOY			
Crop Scientific Name	Glycine max GMO			
Crop Name	Soybean, Round>			
Part Rated	- C			
Rating Date	Sep-24-2013	Sep-23-2013	Sep-23-2013	
Rating Type	YIELD	CONTRO	CONTRO	
Rating Unit	BU/AC	%	%	
Number of Subsamples	1	1	1	
Pest Stage Majority		52 in	30 in	
Pest Density, Unit		7 YD2	6 YD2	
Assessed By				
Days After First/Last Applic.	131 92	130 91	130 91	
Plant-Eval Interval	131 DP-1	130 DP-1	130 DP-1	
Days After Emergence	125 DE-1	124 DE-1	124 DE-1	
Trt Treatment	Rate Appl			
No. Name	Rate Unit Code Plot	7	8	9
6 FIERCE	2.85 oz ai/a A 202	51.30	75.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C 303	79.50	97.0	99.0
AMS - Liquid	2.5 lb ai/a C 503	84.60	98.0	99.0
	803	82.00	98.0	99.0
	901	82.00	99.0	99.0
	Mean =	75.88	93.4	99.0
7 AUTHORITY ASSIST	2.5 oz ai/a A 203	38.00	70.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C 402	69.70	95.0	99.0
AMS - Liquid	2.5 lb ai/a C 501	78.20	97.0	99.0
	702	72.30	96.0	99.0
	1002	51.10	97.0	99.0
	Mean =	61.86	91.0	99.0
8 PREFIX	1.32 lb ai/a A 204	81.90	99.0	99.0
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C 301	70.50	65.0	99.0
AMS - Liquid	2.5 lb ai/a C 504	92.80	99.0	99.0
	804	100.30	99.0	99.0
	1004	96.20	99.0	99.0
	Mean =	88.34	92.2	99.0

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EFFECT OF WEED COMPETITION ON SOYBEAN YIELD

Trial ID: 13S-THP-CTS-44 Protocol ID: 13S-THP-CTS-44
Location: Throckmorton Study Director:
Project ID: VUSA2013FIERCCEMD64.01 Investigator: Dr. Bill Johnson
Sponsor Contact: Valent - Eric Ott

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

P = Pest is Part Rated

C = Crop is Part Rated

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

39 DP-1 = 1 GLXM02 May-16-2013

55 DP-1 = 1 GLXM02 May-16-2013

131 DP-1 = 1 GLXM02 May-16-2013

130 DP-1 = 1 GLXM02 May-16-2013

Purdue University

EFFECT OF WEED COMPETITION ON SOYBEAN YIELD

Trial ID: 13S-THP-CTS-44 Protocol ID: 13S-THP-CTS-44
 Location: Throckmorton Study Director:
 Project ID: VUSA2013FIERCCEMD64.01 Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR	CHEAL	SETFA	AMBTR	CHEAL			
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Chenopodium al>			
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Giant foxtail	Giant ragweed	Common lambsqu>			
Crop Code									
BBCH Scale									
Crop Scientific Name									
Crop Name									
Part Rated	- P	- P	- P	- P	- P	- P			
Rating Date	Jun-24-2013	Jun-24-2013	Jun-24-2013	Jul-10-2013	Jul-10-2013	Jul-10-2013			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONPRE			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Pest Stage Majority	1-13 IN	8-30 IN	1-16 IN	4-36 IN	18-48 IN	12-30 IN			
Pest Density, Unit	10 FT2	10 YD2	18 FT2	10 FT2	5 YD2	4 YD2			
Assessed By	MW	MW	MW	BM/GT	BM/GT	BM/GT			
Days After First/Last Applic.	39 13	39 13	39 13	55 16	55 16	55 16			
Plant-Eval Interval	39 DP-1	39 DP-1	39 DP-1	55 DP-1	55 DP-1	55 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	49 DE-1	49 DE-1	49 DE-1			
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit	Code	1	2	3	4	5	6
1 Untreated Check				0.0 c	0.0 d	0.0 c	0.0 c	0.0 b	0.0 b
2 ROUNDUP PWR MAX(AE)	1.13 lb ae/a	B		94.2 a	92.8 a	97.4 a	96.2 b	96.6 a	99.0 a
AMS - Liquid	2.5 lb ai/a	B							
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 lb ai/a	C							
3 VALOR SX	1.02 oz ai/a	A		90.8 a	51.0 bc	99.0 a	98.6 a	96.2 a	99.0 a
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 lb ai/a	C							
4 Valor SX (51 WG)	0.9 oz ai/a	A		75.0 b	41.0 c	97.2 a	99.0 a	97.0 a	99.0 a
Classic	0.309 oz ai/a	A							
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 lb ai/a	C							
5 FIERCE	2.28 oz ai/a	A		96.6 a	75.0 abc	99.0 a	99.0 a	97.4 a	99.0 a
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 lb ai/a	C							
6 FIERCE	2.85 oz ai/a	A		96.2 a	51.0 bc	99.0 a	99.0 a	96.2 a	99.0 a
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 lb ai/a	C							
7 AUTHORITY ASSIST	2.5 oz ai/a	A		90.2 a	8.0 d	99.0 a	99.0 a	95.2 a	99.0 a
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 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			
Pest Code	SETFA	AMBTR	CHEAL	SETFA	AMBTR	CHEAL			
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Setaria faberi	Ambrosia trifi>	Chenopodium al>			
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Giant foxtail	Giant ragweed	Common lambsqu>			
Crop Code									
BBCH Scale									
Crop Scientific Name									
Crop Name									
Part Rated	- P	- P	- P	- P	- P	- P			
Rating Date	Jun-24-2013	Jun-24-2013	Jun-24-2013	Jul-10-2013	Jul-10-2013	Jul-10-2013			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONPRE			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Pest Stage Majority	1-13 IN	8-30 IN	1-16 IN	4-36 IN	18-48 IN	12-30 IN			
Pest Density, Unit	10 FT2	10 YD2	18 FT2	10 FT2	5 YD2	4 YD2			
Assessed By	MW	MW	MW	BM/GT	BM/GT	BM/GT			
Days After First/Last Applic.	39 13	39 13	39 13	55 16	55 16	55 16			
Plant-Eval Interval	39 DP-1	39 DP-1	39 DP-1	55 DP-1	55 DP-1	55 DP-1			
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	49 DE-1	49 DE-1	49 DE-1			
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit	Code	1	2	3	4	5	6
8 PREFIX	1.32 lb ai/a	A		97.8 a	78.0 ab	87.0 b	99.0 a	97.4 a	98.6 a
ROUNDUP PWR MAX(AE)	1.13 lb ae/a	C							
AMS - Liquid	2.5 lb ai/a	C							
LSD (P=.05)				7.73	25.50	7.63	0.67	2.50	0.41
Standard Deviation				5.97	19.69	5.89	0.51	1.93	0.32
CV				7.45	39.69	6.95	0.6	2.28	0.37
Bartlett's X2				32.795	16.185	13.911	0.161	5.85	0.0
P(Bartlett's X2)				0.001*	0.013*	0.001*	0.688	0.44	.
Replicate F				1.318	0.734	0.567	0.568	0.538	1.000
Replicate Prob(F)				0.2874	0.5763	0.6888	0.6882	0.7087	0.4241
Treatment F				154.451	13.984	171.203	22982.151	1570.000	61186.541
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Pest Type		W Weed	W Weed
Pest Code		AMBTR	CHEAL
Pest Scientific Name		Ambrosia trifi>	Chenopodium al>
Pest Name		Giant ragweed	Common lambsqu>
Crop Code	GLXM02		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max GMO		
Crop Name	Soybean, Round>		
Part Rated	- C		
Rating Date	Sep-24-2013	Sep-23-2013	Sep-23-2013
Rating Type	YIELD	CONTRO	CONTRO
Rating Unit	BU/AC	%	%
Number of Subsamples	1	1	1
Pest Stage Majority		52 in	30 in
Pest Density, Unit		7 YD2	6 YD2
Assessed By			
Days After First/Last Applic.	131 92	130 91	130 91
Plant-Eval Interval	131 DP-1	130 DP-1	130 DP-1
Days After Emergence	125 DE-1	124 DE-1	124 DE-1
Trt No.	Treatment	Rate	Appl
	Rate	Unit	Code
7			
8			
9			
1	Untreated Check	6.68 c	0.0 b
2	ROUNDUP PWR MAX(AE) AMS - Liquid	1.13 lb ae/a B 2.5 lb ai/a B	84.96 a
	ROUNDUP PWR MAX(AE) AMS - Liquid	1.13 lb ae/a C 2.5 lb ai/a C	95.8 a
3	VALOR SX ROUNDUP PWR MAX(AE) AMS - Liquid	1.02 oz ai/a A 1.13 lb ae/a C 2.5 lb ai/a C	79.56 a
4	Valor SX (51 WG) Classic ROUNDUP PWR MAX(AE) AMS - Liquid	0.9 oz ai/a A 0.309 oz ai/a A 1.13 lb ae/a C 2.5 lb ai/a C	79.78 a
5	FIERCE ROUNDUP PWR MAX(AE) AMS - Liquid	2.28 oz ai/a A 1.13 lb ae/a C 2.5 lb ai/a C	93.8 a
6	FIERCE ROUNDUP PWR MAX(AE) AMS - Liquid	2.85 oz ai/a A 1.13 lb ae/a C 2.5 lb ai/a C	97.0 a
7	AUTHORITY ASSIST ROUNDUP PWR MAX(AE) AMS - Liquid	2.5 oz ai/a A 1.13 lb ae/a C 2.5 lb ai/a C	75.88 a
		61.86 b	91.0 a
			99.0 a

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Pest Type		W Weed	W Weed
Pest Code		AMBTR	CHEAL
Pest Scientific Name		Ambrosia trifi>	Chenopodium al>
Pest Name		Giant ragweed	Common lambsqu>
Crop Code	GLXM02		
BBCH Scale	BSOY		
Crop Scientific Name	Glycine max GMO		
Crop Name	Soybean, Round>		
Part Rated	- C		
Rating Date	Sep-24-2013	Sep-23-2013	Sep-23-2013
Rating Type	YIELD	CONTRO	CONTRO
Rating Unit	BU/AC	%	%
Number of Subsamples	1	1	1
Pest Stage Majority		52 in	30 in
Pest Density, Unit		7 YD2	6 YD2
Assessed By			
Days After First/Last Applic.	131 92	130 91	130 91
Plant-Eval Interval	131 DP-1	130 DP-1	130 DP-1
Days After Emergence	125 DE-1	124 DE-1	124 DE-1
Trt Treatment	Rate Appl		
No. Name	Rate Unit Code	7	8
			9
8 PREFIX	1.32 lb ai/a A	88.34 a	92.2 a
ROUNDUP PWR MAX(AE)	1.13 lb ae/a C		99.0 a
AMS - Liquid	2.5 lb ai/a C		
LSD (P=.05)		13.013	10.61
Standard Deviation		10.046	8.19
CV		14.29	9.93
Bartlett's X2		3.921	12.254
P(Bartlett's X2)		0.789	0.057
Replicate F		5.023	1.876
Replicate Prob(F)		0.0035	0.1426
Treatment F		36.007	83.076
Treatment Prob(F)		0.0001	0.0001

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EFFECT OF WEED COMPETITION ON SOYBEAN YIELD

Trial ID: 13S-THP-CTS-44 Protocol ID: 13S-THP-CTS-44
Location: Throckmorton Study Director:
Project ID: VUSA2013FIERCCEMD64.01 Investigator: Dr. Bill Johnson
Sponsor Contact: Valent - Eric Ott

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

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

YIELD = yield

Rating Unit

% = percent

BU/AC = bushels per acre

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Plant-Eval Interval

39 DP-1 = 1 GLXM02 May-16-2013

55 DP-1 = 1 GLXM02 May-16-2013

131 DP-1 = 1 GLXM02 May-16-2013

130 DP-1 = 1 GLXM02 May-16-2013