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Valor Interaction with Acetochlor

Trial ID: 14S-THP-CTS-41 Protocol ID: 14S-THP-CTS-41
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: Fierce MD 64.08 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

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

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow 2933 **Description:** RR2
BBCH Scale: BSOY **Planting Date:** May-7-2014
Planting Method: SEEDED seeded **Rate, Unit:** 130000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 15 IN
Seed Bed: FINE fine
Soil Moisture: DRY dry **Emergence Date:** May-13-2014

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:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 4 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf

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Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 60 FT	Experimental Unit: 1 PLOT plot
Plot Area, Unit: 600 FT ²	Tillage Type: CONTIL conventional-till
Replications: 5	Study Design: RACOB L Randomized Complete Block (RCB)
	Untreated Arrangement: INCLUDED single control randomized in each block

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	C	D
Application Date:	May-8-2014	Jun-13-2014	Jun-13-2014	Jul-2-2014
Time of Day:	AM			
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	ATPLAN	EAPOWE	MIPOCR	LAPOCR
Application Placement:	BROADC	BROADC	BROADC	BROADC
Air Temperature, Unit:	74 F	65 F	65 F	77 F
% Relative Humidity:	62	66	66	66
Wind Velocity, Unit:	10 mph	4.5 MPH	4.5 MPH	3 MPH
Wind Direction:	SW	NW	NW	NW
Dew Presence (Y/N):	N no	N no	N no	Y yes
Soil Temperature, Unit:	64 F	70 F	70 F	72 F
Soil Moisture:	Dry	DRY	DRY	MOIST
% Cloud Cover:	15	5	5	10

Crop Stage At Each Application				
	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:	00	13	13	60

Pest Stage At Each Application				
	A	B	C	D
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Height, Unit:		6 IN	6 IN	30 IN
Height Minimum, Maximum:		1 6	1 6	5 40
Density, Unit:		3 FT ²	3 FT ²	2 FT ²
Pest 2 Code, Type, Scale:	SETFA W	SETFA W	SETFA W	SETFA W
Height, Unit:		3 IN	3 IN	15 IN
Height Minimum, Maximum:		1 4	1 4	5 40
Density, Unit:		2 YD ²	2 YD ²	3 FT ²
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W	CHEAL W
Height, Unit:		2 IN	2 IN	17 IN
Height Minimum, Maximum:		1 3	1 3	5 40
Density, Unit:		2 YD ²	2 YD ²	1 YD ²
Pest 4 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W	ABUTH W
Height Minimum, Maximum:		2 5	2 5	
Density, Unit:		2 YD ²	2 YD ²	

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Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 FORD	CO2 FORD	CO2 FORD	CUB
Equipment Type:	SPTRMO	SPTRMO	SPTRMO	SPTRMO
Operation Pressure, Unit:	25 PSI	25 PSI	25 PSI	25 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	XR 100 02	XR 100 02	XR 100 02	XR 110 02
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Nozzles/Row:	6	6	6	6
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT
Ground Speed, Unit:	2.1 MPH	2.1 MPH	2.1 MPH	2.1 MPH
Carrier:	MEIGS	MEIGS	MEIGS	MEIGS
Spray Volume, Unit:	20 gal/ac	20 gal/ac	20 gal/ac	20 gal/ac
Mix Size, Unit:	2.5 liters	2.5 liters	2.5 liters	2.5 liters
Propellant:	CO2	CO2	CO2	

No. Date By Deviations

1. Jun-13-2014 Application B and C applied at same time

Reasons: Treatments needed to be applied due to weed size.

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 Location: Throckmorton Study Director: Bill Johnson
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 Sponsor Contact: Valent - Eric Ott

Reps: 5 Plots: 10 by 60 feet
 Spray vol: 20 gal/ac Mix size: 3 liters (min 5.2141)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Other Rate	Other Rate	Growth Unit	Appl Code	Appl Description	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
1	Untreated Check											101	203	304	402	501
2	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			EAPOWE B	4-6" weeds	37.5 ml/mx	102	204	301	404	503
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			EAPOWE B	4-6" weeds	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			EAPOWE B	4-6" weeds	110.3 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			MIPOCR C	21 DAT B	37.5 ml/mx					
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			MIPOCR C	21 DAT B	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			MIPOCR C	21 DAT B	110.3 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			LAPOCR D	56 DAP	37.5 ml/mx					
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			LAPOCR D	56 DAP	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			LAPOCR D	56 DAP	110.3 ml/mx					
3	Fierce (76 WG)	76 %	WG	WG	2.28 oz ai/a	3 oz wt/a			PREMCR A		3.37 g/mx	103	202	303	401	502
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			MIPOCR C	21 DAT B	37.5 ml/mx					
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			MIPOCR C	21 DAT B	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			MIPOCR C	21 DAT B	110.3 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			LAPOCR D	56 DAP	37.5 ml/mx					
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			LAPOCR D	56 DAP	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			LAPOCR D	56 DAP	110.3 ml/mx					
4	Fierce (76 WG)	76 %	WG	WG	2.28 oz ai/a	3 oz wt/a			PREMCR A		3.37 g/mx	104	201	302	403	504
	Cobra	2 LBA/GAL	EC	EC	3.13 oz ai/a	12.5 fl oz/a			MIPOCR C	21 DAT B	14.67 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			MIPOCR C	21 DAT B	37.5 ml/mx					
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			MIPOCR C	21 DAT B	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			MIPOCR C	21 DAT B	110.3 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL	SL	18 oz ae/a	32 fl oz/a			LAPOCR D	56 DAP	37.5 ml/mx					
	NIS	100 %	SL	SL	0.25 % v/v	0.25 % v/v			LAPOCR D	56 DAP	7.499 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL	SL	2.5 lb ai/a	2.94 qt/a			LAPOCR D	56 DAP	110.3 ml/mx					

Sort Order: Treatment

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SETFA	AMBTR	CHEAL	AMARE	ABUTH	SETFA		
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Amaranthus ret>	Abutilon theop>	Setaria faberi		
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Redroot pigweed	Velvetleaf	Giant foxtail		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Rating Date	Jun-3-2014	Jun-3-2014	Jun-3-2014	Jun-3-2014	Jun-3-2014	Jun-13-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V2	V2	V2	V2	V2	V2		
Pest Stage Majority	1-4	3-6	1-3	1-3	1-3	1-4		
Pest Density, Unit	3 FT2	2 YD2	4 FT2	5 FT2	1 YD2	2 YD2		
Days After First/Last Applic.	26 26	26 26	26 26	26 26	26 26	36 36		
Plant-Eval Interval	27 DP-1	27 DP-1	27 DP-1	27 DP-1	27 DP-1	37 DP-1		
Days After Emergence	21 DE-1	21 DE-1	21 DE-1	21 DE-1	21 DE-1	31 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
		203	0.0	0.0	0.0	0.0	0.0	0.0
		304	0.0	0.0	0.0	0.0	0.0	0.0
		402	0.0	0.0	0.0	0.0	0.0	0.0
		501	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 PowerMax 4.5 SL	18 oz ae/a B	102	30.0	50.0	0.0	30.0	90.0	0.0
NIS	0.25 % v/v B	204	90.0	60.0	30.8*	75.0	80.0	0.0
AMS - Liquid	2.5 lb ai/a B	301	60.0	50.0	50.0	30.0	50.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	404	30.0	50.0	0.0	10.0	80.0	0.0
NIS	0.25 % v/v C	503	10.0	80.0	70.0	40.0	50.0	0.0
AMS - Liquid	2.5 lb ai/a C							
Roundup PowerMax 4.5 SL	18 oz ae/a D							
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	44.0	58.0	30.2	37.0	70.0	0.0
3 Fierce (76 WG)	2.28 oz ai/a A	103	99.0	90.0	99.0	99.0	99.0	90.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	202	99.0	90.0	99.0	99.0	99.0	93.0
NIS	0.25 % v/v C	303	99.0	99.0	99.0	99.0	99.0	94.0
AMS - Liquid	2.5 lb ai/a C	401	70.0	80.0	99.0	99.0	99.0	75.0
Roundup PowerMax 4.5 SL	18 oz ae/a D	502	60.0	99.0	99.0	99.0	90.0	85.0
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	85.4	91.6	99.0	99.0	97.2	87.4
4 Fierce (76 WG)	2.28 oz ai/a A	104	95.0	90.0	99.0	99.0	99.0	87.0
Cobra	3.13 oz ai/a C	201	99.0	90.0	99.0	99.0	99.0	95.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	302	99.0	95.0	99.0	99.0	99.0	95.0
NIS	0.25 % v/v C	403	99.0	90.0	99.0	99.0	99.0	90.0
AMS - Liquid	2.5 lb ai/a C	504	99.0	95.0	90.0	99.0	99.0	95.0
Roundup PowerMax 4.5 SL	18 oz ae/a D							
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	98.2	92.0	97.2	99.0	99.0	92.4

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMBTR	ABUTH	AMARE	IPOHE	SETFA	AMBTR				
Pest Scientific Name	Ambrosia trifida>	Abutilon theophrasti>	Amaranthus retrofractus>	Ipomoea hederifolia>	Setaria faberii>	Ambrosia trifida>				
Pest Name	Giant ragweed	Velvetleaf	Redroot pigweed	Ivyleaf morningglow	Giant foxtail	Giant ragweed				
Crop Code										
BBCB Scale										
Crop Scientific Name										
Crop Name										
Rating Date	Jun-13-2014	Jun-13-2014	Jun-13-2014	Jun-13-2014	Jun-18-2014	Jun-18-2014				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT				
Number of Subsamples	1	1	1	1	1	1				
Crop Stage Majority										
Pest Stage Majority	1-6	2-5	2-5	2-5	16	30				
Pest Density, Unit	3 FT2	2 YD2	2 YD2	2 YD2	18 FT2	5 YD2				
Days After First/Last Applic.	36 36	36 36	36 36	36 36	41 5	41 5				
Plant-Eval Interval	37 DP-1	37 DP-1	37 DP-1	37 DP-1	42 DP-1	42 DP-1				
Days After Emergence	31 DE-1	31 DE-1	31 DE-1	31 DE-1	36 DE-1	36 DE-1				
Trt No.	Treatment Name	Rate	Appl Code	Plot	7	8	9	10	11	12
1	Untreated Check			101	0.0	0.0	0.0	0.0	0.0	0.0
				203	0.0	0.0	0.0	0.0	0.0	0.0
				304	0.0	0.0	0.0	0.0	0.0	0.0
				402	0.0	0.0	0.0	0.0	0.0	0.0
				501	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 PowerMax 4.5 SL	18 oz ae/a	B	102	0.0	0.0	0.0	0.0	90.0	75.0
	NIS	0.25 % v/v	B	204	0.0	0.0	0.0	0.0	92.0	85.0
	AMS - Liquid	2.5 lb ai/a	B	301	0.0	0.0	0.0	0.0	94.0	75.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	404	0.0	0.0	0.0	0.0	95.0	80.0
	NIS	0.25 % v/v	C	503	0.0	0.0	0.0	0.0	80.0	83.0
	AMS - Liquid	2.5 lb ai/a	C							
	Roundup PowerMax 4.5 SL	18 oz ae/a	D							
	NIS	0.25 % v/v	D							
	AMS - Liquid	2.5 lb ai/a	D							
				Mean =	0.0	0.0	0.0	0.0	90.2	79.6
3	Fierce (76 WG)	2.28 oz ai/a	A	103	70.0	85.0	90.0	80.0	99.0	80.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	202	87.0	85.0	90.0	99.0	93.0	80.0
	NIS	0.25 % v/v	C	303	95.0	99.0	99.0	99.0	99.0	90.0
	AMS - Liquid	2.5 lb ai/a	C	401	70.0	99.0	99.0	99.0	87.0	73.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	D	502	99.0	99.0	99.0	99.0	99.0	87.0
	NIS	0.25 % v/v	D							
	AMS - Liquid	2.5 lb ai/a	D							
				Mean =	84.2	93.4	95.4	95.2	95.4	82.0
4	Fierce (76 WG)	2.28 oz ai/a	A	104	65.0	99.0	75.0	70.0	93.0	90.0
	Cobra	3.13 oz ai/a	C	201	94.0	99.0	99.0	99.0	95.0	90.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	302	95.0	99.0	99.0	99.0	99.0	87.0
	NIS	0.25 % v/v	C	403	80.0	99.0	99.0	60.0	99.0	85.0
	AMS - Liquid	2.5 lb ai/a	C	504	95.0	99.0	99.0	99.0	96.0	95.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	D							
	NIS	0.25 % v/v	D							
	AMS - Liquid	2.5 lb ai/a	D							
				Mean =	85.8	99.0	94.2	85.4	96.4	89.4

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Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	AMARE	ABUTH	CHEAL	IPHOE				
Pest Scientific Name	Amaranthus ret>	Abutilon theop>	Chenopodium al>	Ipomoea hедера>				
Pest Name	Redroot pigweed	Velvetleaf	Common lambsqu>	lyleaf mornin>				
Crop Code					GLXMA	GLXMA		
BBCB Scale					BSOY	BSOY		
Crop Scientific Name					Glycine max	Glycine max		
Crop Name					Soybean	Soybean		
Rating Date	Jun-18-2014	Jun-18-2014	Jun-18-2014	Jun-18-2014	Jun-26-2014	Jun-26-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYSTU	PHYLMA		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority					V6	V6		
Pest Stage Majority	15	20	14	24				
Pest Density, Unit	3 FT2	2 YD2	5 FT2	1 YD2				
Days After First/Last Applic.	41 5	41 5	41 5	41 5	49 13	49 13		
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1	42 DP-1	50 DP-1	50 DP-1		
Days After Emergence	36 DE-1	36 DE-1	36 DE-1	36 DE-1	44 DE-1	44 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	13	14	15	16	17	18
1 Untreated Check		101	0.0	0.0	0.0	0.0	0.0	0.0
		203	0.0	0.0	0.0	0.0	0.0	0.0
		304	0.0	0.0	0.0	0.0	0.0	0.0
		402	0.0	0.0	0.0	0.0	0.0	0.0
		501	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 PowerMax 4.5 SL	18 oz ae/a B	102	90.0	40.0	65.0	99.0	0.0	0.0
NIS	0.25 % v/v B	204	99.0	80.0	99.0	99.0	0.0	0.0
AMS - Liquid	2.5 lb ai/a B	301	99.0	70.0	90.0	90.5*	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	404	99.0	90.0	85.0	99.0	0.0	0.0
NIS	0.25 % v/v C	503	99.0	80.0	85.0	60.0	0.0	0.0
AMS - Liquid	2.5 lb ai/a C							
Roundup PowerMax 4.5 SL	18 oz ae/a D							
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	97.2	72.0	84.8	89.5	0.0	0.0
3 Fierce (76 WG)	2.28 oz ai/a A	103	99.0	93.0	99.0	99.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	202	99.0	87.0	99.0	93.0	0.0	0.0
NIS	0.25 % v/v C	303	99.0	99.0	99.0	99.0	0.0	0.0
AMS - Liquid	2.5 lb ai/a C	401	99.0	99.0	99.0	99.0	5.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a D	502	99.0	90.0	94.0	99.0	3.0	0.0
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	99.0	93.6	98.0	97.8	1.6	1.0
4 Fierce (76 WG)	2.28 oz ai/a A	104	99.0	99.0	99.0	99.0	5.0	6.0
Cobra	3.13 oz ai/a C	201	99.0	99.0	99.0	90.0	3.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	302	99.0	99.0	99.0	99.0	5.0	7.0
NIS	0.25 % v/v C	403	99.0	99.0	99.0	99.0	3.0	6.0
AMS - Liquid	2.5 lb ai/a C	504	99.0	99.0	99.0	99.0	5.0	7.0
Roundup PowerMax 4.5 SL	18 oz ae/a D							
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	99.0	99.0	99.0	97.2	4.2	6.2

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Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code		SETFA	AMBTR	AMARE	ABUTH	CHEAL				
Pest Scientific Name		Setaria faberi	Ambrosia trifida	Amaranthus retrofractus	Abutilon theophrasti	Chenopodium album				
Pest Name		Giant foxtail	Giant ragweed	Redroot pigweed	Velvetleaf	Common lambsquarters				
Crop Code	GLXMA									
BBCB Scale	BSOY									
Crop Scientific Name	Glycine max									
Crop Name	Soybean									
Rating Date	Jun-26-2014	Jul-1-2014	Jul-1-2014	Jul-1-2014	Jul-1-2014	Jul-1-2014				
Rating Type	PHYNEC	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT				
Number of Subsamples	1	1	1	1	1	1				
Crop Stage Majority	V6					R1				
Pest Stage Majority		36	40	30	25	30				
Pest Density, Unit		10 FT2	4 YD2	6 YD2	2 YD2	1 YD2				
Days After First/Last Applic.	49 13	54 18	54 18	54 18	54 18	54 18				
Plant-Eval Interval	50 DP-1	55 DP-1	55 DP-1	55 DP-1	55 DP-1	55 DP-1				
Days After Emergence	44 DE-1	49 DE-1	49 DE-1	49 DE-1	49 DE-1	49 DE-1				
Trt No.	Treatment Name	Rate	Appl Code	Plot	19	20	21	22	23	24
1	Untreated Check				0.0	0.0	0.0	0.0	0.0	0.0
					0.0	0.0	0.0	0.0	0.0	0.0
					0.0	0.0	0.0	0.0	0.0	0.0
					0.0	0.0	0.0	0.0	0.0	0.0
					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 PowerMax 4.5 SL	18 oz ae/a	B	102	0.0	99.0	87.0	93.0	99.0	99.0
	NIS	0.25 % v/v	B	204	0.0	99.0	96.0	99.0	99.0	99.0
	AMS - Liquid	2.5 lb ai/a	B	301	0.0	99.0	93.0	99.0	99.0	99.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	404	0.0	99.0	83.0	99.0	99.0	99.0
	NIS	0.25 % v/v	C	503	0.0	99.0	99.0	99.0	99.0	99.0
	AMS - Liquid	2.5 lb ai/a	C							
	Roundup PowerMax 4.5 SL	18 oz ae/a	D							
	NIS	0.25 % v/v	D							
	AMS - Liquid	2.5 lb ai/a	D							
	Mean =				0.0	99.0	91.6	97.8	99.0	99.0
3	Fierce (76 WG)	2.28 oz ai/a	A	103	0.0	99.0	96.0	99.0	99.0	99.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	202	0.0	99.0	97.0	99.0	99.0	99.0
	NIS	0.25 % v/v	C	303	0.0	99.0	99.0	99.0	99.0	99.0
	AMS - Liquid	2.5 lb ai/a	C	401	0.0	99.0	93.0	99.0	99.0	99.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	D	502	0.0	99.0	99.0	99.0	99.0	99.0
	NIS	0.25 % v/v	D							
	AMS - Liquid	2.5 lb ai/a	D							
	Mean =				0.0	99.0	96.8	99.0	99.0	99.0
4	Fierce (76 WG)	2.28 oz ai/a	A	104	5.0	99.0	90.0	99.0	99.0	99.0
	Cobra	3.13 oz ai/a	C	201	5.0	99.0	95.0	99.0	99.0	99.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	302	8.0	99.0	95.0	99.0	99.0	99.0
	NIS	0.25 % v/v	C	403	5.0	99.0	91.0	99.0	99.0	99.0
	AMS - Liquid	2.5 lb ai/a	C	504	5.0	99.0	99.0	99.0	99.0	99.0
	Roundup PowerMax 4.5 SL	18 oz ae/a	D							
	NIS	0.25 % v/v	D							
	AMS - Liquid	2.5 lb ai/a	D							
	Mean =				5.6	99.0	94.0	99.0	99.0	99.0

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Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code		SETFA	AMBTR	CHEAL	ABUTH	AMARE		
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Chenopodium ai>	Abutilon theop>	Amaranthus ret>		
Pest Name		Giant foxtail	Giant ragweed	Common lambsqu>	Velvetleaf	Redroot pigweed		
Crop Code	GLXMA							
BBCB Scale	BSOY							
Crop Scientific Name	Glycine max							
Crop Name	Soybean							
Rating Date	Jul-11-2014	Jul-11-2014	Jul-11-2014	Jul-11-2014	Jul-11-2014	Jul-11-2014		
Rating Type	PHYSTU	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	R1	R1	R1	R1	R1	R1		
Pest Stage Majority		36	50	45	39	40		
Pest Density, Unit		10 YD2	2 YD2	3 YD2	2 YD2	2 YD2		
Days After First/Last Applic.	64 9	64 9	64 9	64 9	64 9	64 9		
Plant-Eval Interval	65 DP-1	65 DP-1	65 DP-1	65 DP-1	65 DP-1	65 DP-1		
Days After Emergence	59 DE-1	59 DE-1	59 DE-1	59 DE-1	59 DE-1	59 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	25	26	27	28	29	30
1 Untreated Check		101	0.0	0.0	0.0	0.0	0.0	0.0
		203	0.0	0.0	0.0	0.0	0.0	0.0
		304	0.0	0.0	0.0	0.0	0.0	0.0
		402	0.0	0.0	0.0	0.0	0.0	0.0
		501	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 PowerMax 4.5 SL	18 oz ae/a B	102	0.0	99.0	99.0	99.0	99.0	99.0
NIS	0.25 % v/v B	204	0.0	99.0	99.0	99.0	99.0	99.0
AMS - Liquid	2.5 lb ai/a B	301	0.0	99.0	99.0	99.0	99.0	99.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	404	0.0	99.0	95.0	99.0	99.0	99.0
NIS	0.25 % v/v C	503	0.0	99.0	99.0	99.0	99.0	99.0
AMS - Liquid	2.5 lb ai/a C							
Roundup PowerMax 4.5 SL	18 oz ae/a D							
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	0.0	99.0	98.2	99.0	99.0	99.0
3 Fierce (76 WG)	2.28 oz ai/a A	103	0.0	99.0	99.0	99.0	99.0	99.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	202	3.0	99.0	99.0	99.0	99.0	99.0
NIS	0.25 % v/v C	303	3.0	99.0	99.0	99.0	99.0	99.0
AMS - Liquid	2.5 lb ai/a C	401	5.0	99.0	99.0	99.0	99.0	99.0
Roundup PowerMax 4.5 SL	18 oz ae/a D	502	0.0	99.0	99.0	99.0	99.0	99.0
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	2.2	99.0	99.0	99.0	99.0	99.0
4 Fierce (76 WG)	2.28 oz ai/a A	104	5.0	95.0	99.0	99.0	99.0	99.0
Cobra	3.13 oz ai/a C	201	5.0	99.0	99.0	99.0	99.0	99.0
Roundup PowerMax 4.5 SL	18 oz ae/a C	302	5.0	99.0	99.0	99.0	99.0	99.0
NIS	0.25 % v/v C	403	5.0	99.0	95.0	99.0	99.0	99.0
AMS - Liquid	2.5 lb ai/a C	504	7.0	99.0	99.0	99.0	99.0	99.0
Roundup PowerMax 4.5 SL	18 oz ae/a D							
NIS	0.25 % v/v D							
AMS - Liquid	2.5 lb ai/a D							
		Mean =	5.4	98.2	98.2	99.0	99.0	99.0

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code		GLXMA	GLXMA	
BBCH Scale		BSOY	BSOY	
Crop Scientific Name		Glycine max	Glycine max	
Crop Name		Soybean	Soybean	
Rating Date		Jul-24-2014	Oct-23-2014	
Rating Type		PHYSTU	YIELD	
Rating Unit		%	bu/ac	
Sample Size, Unit		1 PLOT		
Number of Subsamples		1	1	
Crop Stage Majority		R2		
Pest Stage Majority				
Pest Density, Unit				
Days After First/Last Applic.		77 22	168 113	
Plant-Eval Interval		78 DP-1	169 DP-1	
Days After Emergence		72 DE-1	163 DE-1	
Trt No.	Treatment	Rate	Appl	
	Name	Rate Unit	Code Plot	
				31 32
1	Untreated Check			0.0 5.10
				0.0 49.60
				0.0 50.90
				0.0 16.10
				0.0 26.00
				Mean = 0.0 29.54
2	Roundup PowerMax 4.5 SL	18 oz ae/a B	102	0.0 76.20
	NIS	0.25 % v/v B	204	0.0 93.90
	AMS - Liquid	2.5 lb ai/a B	301	0.0 52.90
	Roundup PowerMax 4.5 SL	18 oz ae/a C	404	0.0 86.70
	NIS	0.25 % v/v C	503	0.0 79.90
	AMS - Liquid	2.5 lb ai/a C		
	Roundup PowerMax 4.5 SL	18 oz ae/a D		
	NIS	0.25 % v/v D		
	AMS - Liquid	2.5 lb ai/a D		
				Mean = 0.0 77.92
3	Fierce (76 WG)	2.28 oz ai/a A	103	0.0 79.20
	Roundup PowerMax 4.5 SL	18 oz ae/a C	202	0.0 40.20
	NIS	0.25 % v/v C	303	2.0 71.60
	AMS - Liquid	2.5 lb ai/a C	401	3.0 64.90
	Roundup PowerMax 4.5 SL	18 oz ae/a D	502	3.0 58.30
	NIS	0.25 % v/v D		
	AMS - Liquid	2.5 lb ai/a D		
				Mean = 1.6 62.84
4	Fierce (76 WG)	2.28 oz ai/a A	104	2.0 98.10
	Cobra	3.13 oz ai/a C	201	3.0 95.70
	Roundup PowerMax 4.5 SL	18 oz ae/a C	302	3.0 78.30
	NIS	0.25 % v/v C	403	3.0 63.00
	AMS - Liquid	2.5 lb ai/a C	504	5.0 61.70
	Roundup PowerMax 4.5 SL	18 oz ae/a D		
	NIS	0.25 % v/v D		
	AMS - Liquid	2.5 lb ai/a D		
				Mean = 3.2 79.36

Purdue University

Valor Interaction with Acetochlor

Trial ID: 14S-THP-CTS-41 Protocol ID: 14S-THP-CTS-41
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: Fierce MD 64.08 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
 AMARE, Amaranthus retroflexus, = US
 ABUTH, Abutilon theophrasti, = US
 IPOHE, Ipomoea hederacea, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown
 PHYSTU = phytotoxicity - stunting
 PHYLMA = phytotoxicity - leaf malformation
 PHYNEC = phytotoxicity - necrosis /burn
 YIELD = yield

Rating Unit

% = percent
 bu/ac = bushels per acre

PLOT = total plot

Pest Stage Majority

16 = 6 true leaves, leaf pairs or whorls unfolded
 30 = Beginning of stem elongation; G□ Beginning of shooting
 15 = 5 true leaves, leaf pairs or whorls unfolded
 14 = 4 true leaves, leaf pairs or whorls unfolded
 24 = 4 side shoots visible; G□ 4 tillers visible
 36 = 6 visibly extended internode; G□ 6 node stage
 40 = V□ Vegetative reproductive organs begin to develop (rhizomes, stolons, tubers, runners, bulbs)
 25 = 5 side shoots visible; G□ 5 tillers visible
 45 = G□ Flag leaf sheath swollen (late-boot)
 39 = 9 visibly extended internode; G□ 9 node stage

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

27 DP-1 = 1 GLXMA May-7-2014
 37 DP-1 = 1 GLXMA May-7-2014
 42 DP-1 = 1 GLXMA May-7-2014
 50 DP-1 = 1 GLXMA May-7-2014
 55 DP-1 = 1 GLXMA May-7-2014
 65 DP-1 = 1 GLXMA May-7-2014
 78 DP-1 = 1 GLXMA May-7-2014
 169 DP-1 = 1 GLXMA May-7-2014

Purdue University

Valor Interaction with Acetochlor

Trial ID: 14S-THP-CTS-41 Protocol ID: 14S-THP-CTS-41
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: Fierce MD 64.08 Investigator: Dr. Bill Johnson
 Sponsor Contact: Valent - Eric Ott

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE	ABUTH	SETFA	AMBTR
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Amaranthus ret>	Abutilon theop>	Setaria faberi	Ambrosia trifi>
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Redroot pigweed	Velvetleaf	Giant foxtail	Giant ragweed
Crop Code							
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	Jun-3-2014	Jun-3-2014	Jun-3-2014	Jun-3-2014	Jun-3-2014	Jun-13-2014	Jun-13-2014
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority	V2	V2	V2	V2	V2		
Pest Stage Majority	1-4	3-6	1-3	1-3	1-3	1-4	1-6
Pest Density, Unit	3 FT2	2 YD2	4 FT2	5 FT2	1 YD2	2 YD2	3 FT2
Days After First/Last Applic.	26 26	26 26	26 26	26 26	26 26	36 36	36 36
Plant-Eval Interval	27 DP-1	27 DP-1	27 DP-1	27 DP-1	27 DP-1	37 DP-1	37 DP-1
Days After Emergence	21 DE-1	21 DE-1	21 DE-1	21 DE-1	21 DE-1	31 DE-1	31 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2	3	4	5
1 Untreated Check			0.0 c	0.0 c	0.0 c	0.0 c	0.0 c
2 Roundup PowerMax 4.5 SL	18 oz ae/a B		44.0 b	58.0 b	30.2 b	37.0 b	70.0 b
NIS	0.25 % v/v B						
AMS - Liquid	2.5 lb ai/a B						
Roundup PowerMax 4.5 SL	18 oz ae/a C						
NIS	0.25 % v/v C						
AMS - Liquid	2.5 lb ai/a C						
Roundup PowerMax 4.5 SL	18 oz ae/a D						
NIS	0.25 % v/v D						
AMS - Liquid	2.5 lb ai/a D						
3 Fierce (76 WG)	2.28 oz ai/a A		85.4 a	91.6 a	99.0 a	99.0 a	97.2 a
Roundup PowerMax 4.5 SL	18 oz ae/a C						
NIS	0.25 % v/v C						
AMS - Liquid	2.5 lb ai/a C						
Roundup PowerMax 4.5 SL	18 oz ae/a D						
NIS	0.25 % v/v D						
AMS - Liquid	2.5 lb ai/a D						
4 Fierce (76 WG)	2.28 oz ai/a A		98.2 a	92.0 a	97.2 a	99.0 a	99.0 a
Cobra	3.13 oz ai/a C						
Roundup PowerMax 4.5 SL	18 oz ae/a C						
NIS	0.25 % v/v C						
AMS - Liquid	2.5 lb ai/a C						
Roundup PowerMax 4.5 SL	18 oz ae/a D						
NIS	0.25 % v/v D						
AMS - Liquid	2.5 lb ai/a D						
LSD (P=.05)			22.37	9.28	23.29	16.45	12.63
Standard Deviation			16.23	6.74	16.73	11.94	9.17
CV			28.52	11.15	29.56	20.32	13.78
Bartlett's X2			16.583	7.052	11.212	0.0	6.893
P(Bartlett's X2)			0.001*	0.029*	0.001*	.	0.009*
Replicate F			2.097	2.286	0.703	1.000	1.357
Replicate Prob(F)			0.1442	0.1201	0.6060	0.4449	0.3057
Treatment F			37.472	206.683	43.770	83.798	127.568
Treatment Prob(F)			0.0001	0.0001	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.

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Pest Type	W Weed	W Weed	W Weed				W Weed
Pest Code	ABUTH	CHEAL	IPOHE				SETFA
Pest Scientific Name	Abutilon theop>	Chenopodium al>	Ipomoea heder>				Setaria faberi
Pest Name	Velvetleaf	Common lambsqu>	Ivyleaf mornin>				Giant foxtail
Crop Code				GLXMA	GLXMA	GLXMA	
BBCB Scale				BSOY	BSOY	BSOY	
Crop Scientific Name				Glycine max	Glycine max	Glycine max	
Crop Name				Soybean	Soybean	Soybean	
Rating Date	Jun-18-2014	Jun-18-2014	Jun-18-2014	Jun-26-2014	Jun-26-2014	Jun-26-2014	Jul-1-2014
Rating Type	CONTRO	CONTRO	CONTRO	PHYSTU	PHYLMA	PHYNEC	CONTRO
Rating Unit	%	%	%	%	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority				V6	V6	V6	
Pest Stage Majority	20	14	24				36
Pest Density, Unit	2 YD2	5 FT2	1 YD2				10 FT2
Days After First/Last Applic.	41 5	41 5	41 5	49 13	49 13	49 13	54 18
Plant-Eval Interval	42 DP-1	42 DP-1	42 DP-1	50 DP-1	50 DP-1	50 DP-1	55 DP-1
Days After Emergence	36 DE-1	36 DE-1	36 DE-1	44 DE-1	44 DE-1	44 DE-1	49 DE-1
Trt Treatment							
No. Name	14	15	16	17	18	19	20
1 Untreated Check	0.0 c	0.0 c	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b
2 Roundup PowerMax 4.5 SL 18 oz ae/a B NIS 0.25 % v/v B AMS - Liquid 2.5 lb ai/a B Roundup PowerMax 4.5 SL 18 oz ae/a C NIS 0.25 % v/v C AMS - Liquid 2.5 lb ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a D NIS 0.25 % v/v D AMS - Liquid 2.5 lb ai/a D	72.0 b	84.8 b	89.5 a	0.0 b	0.0 b	0.0 b	99.0 a
3 Fierce (76 WG) 2.28 oz ai/a A Roundup PowerMax 4.5 SL 18 oz ae/a C NIS 0.25 % v/v C AMS - Liquid 2.5 lb ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a D NIS 0.25 % v/v D AMS - Liquid 2.5 lb ai/a D	93.6 a	98.0 a	97.8 a	1.6 b	1.0 b	0.0 b	99.0 a
4 Fierce (76 WG) 2.28 oz ai/a A Cobra 3.13 oz ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a C NIS 0.25 % v/v C AMS - Liquid 2.5 lb ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a D NIS 0.25 % v/v D AMS - Liquid 2.5 lb ai/a D	99.0 a	99.0 a	97.2 a	4.2 a	6.2 a	5.6 a	99.0 a
LSD (P=.05)	13.69	8.73	13.11	1.84	1.67	0.92	0.00
Standard Deviation	9.93	6.33	9.42	1.33	1.21	0.67	0.00
CV	15.02	8.99	13.25	91.88	67.28	47.92	0.0
Bartlett's X2	5.107	8.194	14.188	1.968	3.265	0.0	0.0
P(Bartlett's X2)	0.024*	0.004*	0.001*	0.161	0.071	.	.
Replicate F	1.041	0.996	0.730	0.662	0.886	1.000	0.000
Replicate Prob(F)	0.4264	0.4469	0.5899	0.6302	0.5011	0.4449	1.0000
Treatment F	105.415	280.326	127.459	11.070	30.091	87.111	0.000
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0009	0.0001	0.0001	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	AMARE	ABUTH	CHEAL	GLXMA	SETFA	AMBTR		
Pest Scientific Name	Ambrosia trifi>	Amaranthus ret>	Abutilon theop>	Chenopodium al>		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant ragweed	Redroot pigweed	Velvetleaf	Common lambsqu>		Giant foxtail	Giant ragweed		
Crop Code					GLXMA				
BBCH Scale					BSOY				
Crop Scientific Name					Glycine max				
Crop Name					Soybean				
Rating Date	Jul-1-2014	Jul-1-2014	Jul-1-2014	Jul-1-2014	Jul-11-2014	Jul-11-2014	Jul-11-2014		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYSTU	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority					R1	R1	R1		
Pest Stage Majority	40	30	25	30		36	50		
Pest Density, Unit	4 YD2	6 YD2	2 YD2	1 YD2		10 YD2	2 YD2		
Days After First/Last Applic.	54 18	54 18	54 18	54 18	64 9	64 9	64 9		
Plant-Eval Interval	55 DP-1	55 DP-1	55 DP-1	55 DP-1	65 DP-1	65 DP-1	65 DP-1		
Days After Emergence	49 DE-1	49 DE-1	49 DE-1	49 DE-1	59 DE-1	59 DE-1	59 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	21	22	23	24	25	26	27
1 Untreated Check	0.0 c		0.0 b	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 b
2 Roundup PowerMax 4.5 SL 18 oz ae/a B NIS 0.25 % v/v B AMS - Liquid 2.5 lb ai/a B Roundup PowerMax 4.5 SL 18 oz ae/a C NIS 0.25 % v/v C AMS - Liquid 2.5 lb ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a D NIS 0.25 % v/v D AMS - Liquid 2.5 lb ai/a D	91.6 b		97.8 a	99.0 a	99.0 a	99.0 a	0.0 c	99.0 a	98.2 a
3 Fierce (76 WG) 2.28 oz ai/a A Roundup PowerMax 4.5 SL 18 oz ae/a C NIS 0.25 % v/v C AMS - Liquid 2.5 lb ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a D NIS 0.25 % v/v D AMS - Liquid 2.5 lb ai/a D	96.8 a		99.0 a	99.0 a	99.0 a	99.0 a	2.2 b	99.0 a	99.0 a
4 Fierce (76 WG) 2.28 oz ai/a A Cobra 3.13 oz ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a C NIS 0.25 % v/v C AMS - Liquid 2.5 lb ai/a C Roundup PowerMax 4.5 SL 18 oz ae/a D NIS 0.25 % v/v D AMS - Liquid 2.5 lb ai/a D	94.0 ab		99.0 a	99.0 a	99.0 a	99.0 a	5.4 a	98.2 a	98.2 a
LSD (P=.05)	3.98		1.85	0.00	0.00	0.00	1.72	1.23	1.42
Standard Deviation	2.89		1.34	0.00	0.00	0.00	1.25	0.89	1.03
CV	4.09		1.81	0.0	0.0	0.0	65.7	1.21	1.4
Bartlett's X2	3.56		0.0	0.0	0.0	0.0	2.71	0.0	0.0
P(Bartlett's X2)	0.169		0.10	.	.
Replicate F	4.425		1.000	0.000	0.000	0.000	0.529	1.000	3.000
Replicate Prob(F)	0.0199		0.4449	1.0000	1.0000	1.0000	0.7166	0.4449	0.0625
Treatment F	1329.214		6752.251	0.000	0.000	0.000	20.920	15232.564	11362.798
Treatment Prob(F)	0.0001		0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Purdue University

Pest Type	W Weed	W Weed	W Weed		
Pest Code	CHEAL	ABUTH	AMARE		
Pest Scientific Name	Chenopodium ai>	Abutilon theop>	Amaranthus ret>		
Pest Name	Common lambsqu>	Velvetleaf	Redroot pigweed		
Crop Code				GLXMA	GLXMA
BBCB Scale				BSOY	BSOY
Crop Scientific Name				Glycine max	Glycine max
Crop Name				Soybean	Soybean
Rating Date	Jul-11-2014	Jul-11-2014	Jul-11-2014	Jul-24-2014	Oct-23-2014
Rating Type	CONTRO	CONTRO	CONTRO	PHYSTU	YIELD
Rating Unit	%	%	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	R1	R1	R1	R2	
Pest Stage Majority	45	39	40		
Pest Density, Unit	3 YD2	2 YD2	2 YD2		
Days After First/Last Applic.	64 9	64 9	64 9	77 22	168 113
Plant-Eval Interval	65 DP-1	65 DP-1	65 DP-1	78 DP-1	169 DP-1
Days After Emergence	59 DE-1	59 DE-1	59 DE-1	72 DE-1	163 DE-1
Trt Treatment	Rate	Rate	Rate	Rate	Rate
No. Name	Rate Unit	Rate Unit	Rate Unit	Rate Unit	Rate Unit
1 Untreated Check	0.0 b	0.0 b	0.0 b	0.0 c	29.54 b
2 Roundup PowerMax 4.5 SL 18 oz ae/a B	99.0 a	99.0 a	99.0 a	0.0 c	77.92 a
NIS 0.25 % v/v B					
AMS - Liquid 2.5 lb ai/a B					
Roundup PowerMax 4.5 SL 18 oz ae/a C					
NIS 0.25 % v/v C					
AMS - Liquid 2.5 lb ai/a C					
Roundup PowerMax 4.5 SL 18 oz ae/a D					
NIS 0.25 % v/v D					
AMS - Liquid 2.5 lb ai/a D					
3 Fierce (76 WG) 2.28 oz ai/a A	99.0 a	99.0 a	99.0 a	1.6 b	62.84 a
Roundup PowerMax 4.5 SL 18 oz ae/a C					
NIS 0.25 % v/v C					
AMS - Liquid 2.5 lb ai/a C					
Roundup PowerMax 4.5 SL 18 oz ae/a D					
NIS 0.25 % v/v D					
AMS - Liquid 2.5 lb ai/a D					
4 Fierce (76 WG) 2.28 oz ai/a A	99.0 a	99.0 a	99.0 a	3.2 a	79.36 a
Cobra 3.13 oz ai/a C					
Roundup PowerMax 4.5 SL 18 oz ae/a C					
NIS 0.25 % v/v C					
AMS - Liquid 2.5 lb ai/a C					
Roundup PowerMax 4.5 SL 18 oz ae/a D					
NIS 0.25 % v/v D					
AMS - Liquid 2.5 lb ai/a D					
LSD (P=.05)	0.00	0.00	0.00	1.15	25.840
Standard Deviation	0.00	0.00	0.00	0.83	18.750
CV	0.0	0.0	0.0	69.31	30.04
Bartlett's X2	0.0	0.0	0.0	0.403	0.447
P(Bartlett's X2)	.	.	.	0.525	0.93
Replicate F	0.000	0.000	0.000	2.060	0.339
Replicate Prob(F)	1.0000	1.0000	1.0000	0.1495	0.8468
Treatment F	0.000	0.000	0.000	16.964	7.625
Treatment Prob(F)	1.0000	1.0000	1.0000	0.0001	0.0041

Purdue University

Valor Interaction with Acetochlor

Trial ID: 14S-THP-CTS-41 Protocol ID: 14S-THP-CTS-41
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: Fierce MD 64.08 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
 AMARE, Amaranthus retroflexus, = US
 ABUTH, Abutilon theophrasti, = US
 IPOHE, Ipomoea hederacea, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

CONTRO = control / burndown or knockdown
 PHYSTU = phytotoxicity - stunting
 PHYLMA = phytotoxicity - leaf malformation
 PHYNEC = phytotoxicity - necrosis /burn
 YIELD = yield

Rating Unit

% = percent
 bu/ac = bushels per acre

PLOT = total plot

Pest Stage Majority

16 = 6 true leaves, leaf pairs or whorls unfolded
 30 = Beginning of stem elongation; G□ Beginning of shooting
 15 = 5 true leaves, leaf pairs or whorls unfolded
 14 = 4 true leaves, leaf pairs or whorls unfolded
 24 = 4 side shoots visible; G□ 4 tillers visible
 36 = 6 visibly extended internode; G□ 6 node stage
 40 = V□ Vegetative reproductive organs begin to develop (rhizomes, stolons, tubers, runners, bulbs)
 25 = 5 side shoots visible; G□ 5 tillers visible
 45 = G□ Flag leaf sheath swollen (late-boot)
 39 = 9 visibly extended internode; G□ 9 node stage

FT2 = per square foot

YD2 = per square yard

Plant-Eval Interval

27 DP-1 = 1 GLXMA May-7-2014
 37 DP-1 = 1 GLXMA May-7-2014
 42 DP-1 = 1 GLXMA May-7-2014
 50 DP-1 = 1 GLXMA May-7-2014
 55 DP-1 = 1 GLXMA May-7-2014
 65 DP-1 = 1 GLXMA May-7-2014
 78 DP-1 = 1 GLXMA May-7-2014
 169 DP-1 = 1 GLXMA May-7-2014