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Verdict + PPO Tolerance - Sharpen Sensitive Soybean

Trial ID: 14S-THP-CTS-44 Protocol ID: 14S-THP-CTS-44
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: MKD-H-2014-US-SH1-A-01.0 Investigator: Dr. Bill Johnson
 Sponsor Contact: BASF- Gery Welker

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:** wjg@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: Pioneer **Description:** Sharpen Tolereant / Sensitive
BBCH Scale: BSOY **Planting Date:** May-22-2014
Planting Method: SEEDED seeded **Rate, Unit:** 130000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Seed Bed: FINE fine
Soil Moisture: DRY dry **Emergence Date:** May-28-2014

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

Soil Description

Description Name: TPAC - Field 4B
% OM: 2.9 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Toronto-Millbrook
CEC: 13.3

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Application Description

	A	B	C	D
Application Date:	May-8-2014	May-23-2014	Jun-13-2014	Jul-11-2014
Time of Day:	AM			
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	EARPRE	ATPLAN	EAPOWE	LAPOWE
Application Placement:	SOIL	SOIL	FOLIAR	FOLIAR
Air Temperature, Unit:	74 F	73 F	65 F	75 F
% Relative Humidity:	62	51	66	66
Wind Velocity, Unit:	10 mph	4 MPH	4.5 MPH	2 MPH
Wind Direction:	SW	NE	NW	E
Dew Presence (Y/N):	N no	N no	N no	Y yes
Soil Temperature, Unit:	64 F	80 F	70 F	70 F
Soil Moisture:	Dry	DRY	DRY	MOIST
% Cloud Cover:	15	10	5	5

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
Stage Majority, Percent:		00	12	61

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 FORD	CO2 FORD	CO2 FORD	CO2 FORD
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 100 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	CO2

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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	Rep 2	Rep 3	Rep 4
1	Sharpen Tolerant													101	409	703	809
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
2	Sharpen Tolerant													103	407	603	807
	Sharpen 2.85 SC	2.85 LBA/GAL	SC		0.71 oz ai/a		2 fl oz/a		EARPRE	A	EPP14	1.946 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
3	Sharpen Tolerant													107	503	707	901
	Sharpen 2.85 SC	2.85 LBA/GAL	SC		0.71 oz ai/a		2 fl oz/a		EARPRE	A	EPP14	1.946 ml/mx					
	Authority XL (70 WG)	70 %	WG		5.6 oz ai/a		8 oz wt/a		EARPRE	A	EPP14	7.489 g/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
4	Sharpen Tolerant													109	403	609	907
	Verdict (5.57 SC)	5.57 LBA/GAL	SC		6.96 oz ai/a		10 fl oz/a		EARPRE	A	EPP14	9.761 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
5	Sharpen Tolerant													201	509	709	909
	Authority XL (70 WG)	70 %	WG		5.6 oz ai/a		8 oz wt/a		EARPRE	A	EPP14	7.489 g/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
6	Sharpen Tolerant													203	501	803	1009
	Valor SX (51 WG)	51 %	WG		2.04 oz ai/a		4 oz wt/a		EARPRE	A	EPP14	3.745 g/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx					
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					

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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 Unit	Growth Stage	Appl Code	Appl Description	Amt Product to Measure	Rep 1	2	3	4
7	Sharpen Tolerant												207	401	601	903
	Verdict (5.57 SC)	5.57	LBA/GAL	SC	6.96	oz ai/a	10	fl oz/a	EARPRE	A	EPP14	9.761 ml/mx				
	Authority XL (70 WG)	70	%	WG	5.6	oz ai/a	8	oz wt/a	EARPRE	A	EPP14	7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
8	Sharpen Tolerant												209	309	607	1007
	Verdict (5.57 SC)	5.57	LBA/GAL	SC	6.96	oz ai/a	10	fl oz/a	EARPRE	A	EPP14	9.761 ml/mx				
	Valor SX (51 WG)	51	%	WG	2.04	oz ai/a	4	oz wt/a	EARPRE	A	EPP14	3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
9	Sharpen Tolerant												301	307	701	1001
	Sharpen 2.85 SC	2.85	LBA/GAL	SC	0.71	oz ai/a	2	fl oz/a	ATPLAN	B		1.946 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				
10	Sharpen Tolerant												303	507	801	1003
	Sharpen 2.85 SC	2.85	LBA/GAL	SC	0.71	oz ai/a	2	fl oz/a	ATPLAN	B		1.946 ml/mx				
	Authority XL (70 WG)	70	%	WG	5.6	oz ai/a	8	oz wt/a	ATPLAN	B		7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
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	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
11	Sharpen Tolerant												105	405	611	1011
	Verdict (5.57 SC)	5.57	LBA/GAL	SC	6.96	oz ai/a	10	fl oz/a	ATPLAN	B		9.761 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				
12	Sharpen Tolerant												111	311	711	905
	Authority XL (70 WG)	70	%	WG	5.6	oz ai/a	8	oz wt/a	ATPLAN	B		7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
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	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				
13	Sharpen Tolerant												205	511	605	911
	Valor SX (51 WG)	51	%	WG	2.04	oz ai/a	4	oz wt/a	ATPLAN	B		3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
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	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				

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Reps: 4

Plots: 10 by 30 feet

Spray vol: 20 gal/ac

Mix size: 2.5 liters (min 2.0856)

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14	Sharpen Tolerant												211	411	805	811
	Verdict (5.57 SC)	5.57	LBAE/GAL	SC	6.96	oz ai/a	10	fl oz/a	ATPLAN	B		9.761 ml/mx				
	Authority XL (70 WG)	70	%	WG	5.6	oz ai/a	8	oz wt/a	ATPLAN	B		7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
15	Sharpen Tolerant												305	505	705	1005
	Verdict (5.57 SC)	5.57	LBAE/GAL	SC	6.96	oz ai/a	10	fl oz/a	ATPLAN	B		9.761 ml/mx				
	Valor SX (51 WG)	51	%	WG	2.04	oz ai/a	4	oz wt/a	ATPLAN	B		3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
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	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
16	Sharpen Sensitive												102	410	704	810
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
17	Sharpen Sensitive												104	408	604	808
	Sharpen 2.85 SC	2.85	LBAE/GAL	SC	0.71	oz ai/a	2	fl oz/a	EARPRE	A	EPP14	1.946 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				
18	Sharpen Sensitive												108	504	708	902
	Sharpen 2.85 SC	2.85	LBAE/GAL	SC	0.71	oz ai/a	2	fl oz/a	EARPRE	A	EPP14	1.946 ml/mx				
	Authority XL (70 WG)	70	%	WG	5.6	oz ai/a	8	oz wt/a	EARPRE	A	EPP14	7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx					
19	Sharpen Sensitive												110	404	610	908
	Verdict (5.57 SC)	5.57	LBAE/GAL	SC	6.96	oz ai/a	10	fl oz/a	EARPRE	A	EPP14	9.761 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				
20	Sharpen Sensitive												202	510	710	910
	Authority XL (70 WG)	70	%	WG	5.6	oz ai/a	8	oz wt/a	EARPRE	A	EPP14	7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5	LBAE/GAL	SL	18	oz ae/a	32	fl oz/a	LAPOWE	D		31.25 ml/mx				
	AMS - Liquid	3.4	LB/GAL	SL	8.5	lb ai/100 gal	10	qt/100 gal	LAPOWE	D		62.49 ml/mx				

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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 Unit	Growth Stage	Appl Code	Appl Description	Amt Product to Measure	Rep 1	2	3	4
21	Sharpen Sensitive												204	502	804	1010
	Valor SX (51 WG)	51 %		WG	2.04 oz ai/a		4 oz wt/a		EARPRE	A	EPP14	3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
22	Sharpen Sensitive												208	402	602	904
	Verdict (5.57 SC)	5.57 LBA/GAL		SC	6.96 oz ai/a		10 fl oz/a		EARPRE	A	EPP14	9.761 ml/mx				
	Authority XL (70 WG)	70 %		WG	5.6 oz ai/a		8 oz wt/a		EARPRE	A	EPP14	7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
23	Sharpen Sensitive												210	310	608	1008
	Verdict (5.57 SC)	5.57 LBA/GAL		SC	6.96 oz ai/a		10 fl oz/a		EARPRE	A	EPP14	9.761 ml/mx				
	Valor SX (51 WG)	51 %		WG	2.04 oz ai/a		4 oz wt/a		EARPRE	A	EPP14	3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
24	Sharpen Sensitive												302	308	702	1002
	Sharpen 2.85 SC	2.85 LBA/GAL		SC	0.71 oz ai/a		2 fl oz/a		ATPLAN	B		1.946 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
25	Sharpen Sensitive												304	508	802	1004
	Sharpen 2.85 SC	2.85 LBA/GAL		SC	0.71 oz ai/a		2 fl oz/a		ATPLAN	B		1.946 ml/mx				
	Authority XL (70 WG)	70 %		WG	5.6 oz ai/a		8 oz wt/a		ATPLAN	B		7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	C		31.25 ml/mx					
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	C		62.49 ml/mx					
26	Sharpen Sensitive												106	406	612	1012
	Verdict (5.57 SC)	5.57 LBA/GAL		SC	6.96 oz ai/a		10 fl oz/a		ATPLAN	B		9.761 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
27	Sharpen Sensitive												112	312	712	906
	Authority XL (70 WG)	70 %		WG	5.6 oz ai/a		8 oz wt/a		ATPLAN	B		7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL		SL	18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4 LB/GAL		SL	8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					

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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	Rate Unit	Other Rate	Other Unit	Growth Stage	Appl Code	Appl Description	Amt to Measure	Rep 1	Rep 2	Rep 3	Rep 4
28	Sharpen Sensitive												206	512	606	912
	Valor SX (51 WG)	51 %		WG	2.04 oz ai/a		4 oz wt/a		ATPLAN	B		3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx				
AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
29	Sharpen Sensitive												212	412	806	812
	Verdict (5.57 SC)	5.57 LBA/GAL	SC		6.96 oz ai/a		10 fl oz/a		ATPLAN	B		9.761 ml/mx				
	Authority XL (70 WG)	70 %		WG	5.6 oz ai/a		8 oz wt/a		ATPLAN	B		7.489 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					
30	Sharpen Sensitive												306	506	706	1006
	Verdict (5.57 SC)	5.57 LBA/GAL	SC		6.96 oz ai/a		10 fl oz/a		ATPLAN	B		9.761 ml/mx				
	Valor SX (51 WG)	51 %		WG	2.04 oz ai/a		4 oz wt/a		ATPLAN	B		3.745 g/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		ATPLAN	B		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		ATPLAN	B		62.49 ml/mx				
	Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		EAPOWE	C		31.25 ml/mx				
	AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		EAPOWE	C		62.49 ml/mx				
Roundup PowerMax 4.5 SL	4.5 LBAE/GAL	SL		18 oz ae/a		32 fl oz/a		LAPOWE	D		31.25 ml/mx					
AMS - Liquid	3.4 LB/GAL	SL		8.5 lb ai/100 gal		10 qt/100 gal		LAPOWE	D		62.49 ml/mx					

Sort Order: Treatment

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Verdict + PPO Tolerance - Sharpen Sensitive Soybean

Trial ID: 14S-THP-CTS-44 Protocol ID: 14S-THP-CTS-44
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: MKD-H-2014-US-SH1-A-01.0 Investigator: Dr. Bill Johnson
 Sponsor Contact: BASF- Gery Welker

Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014		
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA		
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	V1	V1	V1	V1	V1	V2	V2		
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1		
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6	7
1 Sharpen Tolerant		101	93.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 409	91.0	0.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 703	95.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C 809	88.0	0.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	91.8	0.0	0.0	0.0	0.0	0.0	0.0
2 Sharpen Tolerant		103	93.0	0.0	0.0	0.0	0.0	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	A 407	87.0	3.0	3.0	0.0	0.0	0.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 603	93.0	3.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 807	85.0	3.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	89.5	2.3	0.8	0.0	0.0	0.0	1.3
3 Sharpen Tolerant		107	92.0	0.0	0.0	0.0	0.0	5.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	A 503	94.0	0.0	0.0	0.0	0.0	5.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	A 707	87.0	0.0	3.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 901	93.0	3.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B							
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	91.5	0.8	0.8	0.0	0.0	2.5	0.0
4 Sharpen Tolerant		109	97.0	0.0	0.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A 403	93.0	5.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 609	90.0	0.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 907	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	92.5	1.3	0.0	0.0	0.0	0.0	0.0

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014		
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA	PHYLMA		
Rating Unit	%	%	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1	V1	V1	V1	V2	V2		
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	29 14	40 4	40 4		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1		
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1		
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	Plot	1	2	3	4	5	6	7
5 Sharpen Tolerant			201	95.0	0.0	0.0	0.0	0.0	0.0	3.0
Authority XL (70 WG)	5.6 oz ai/a	A	509	94.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	709	87.0	3.0	3.0	0.0	0.0	5.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B	909	95.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	92.8	0.8	0.8	0.0	0.0	1.3	0.8
6 Sharpen Tolerant			203	95.0	0.0	0.0	0.0	0.0	0.0	3.0
Valor SX (51 WG)	2.04 oz ai/a	A	501	95.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	803	90.0	0.0	0.0	0.0	0.0	0.0	5.0
AMS - Liquid	8.5 lb ai/100 gal	B	1009	85.0	0.0	3.0	0.0	0.0	5.0	7.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	91.3	0.0	0.8	0.0	0.0	1.3	3.8
7 Sharpen Tolerant			207	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A	401	93.0	0.0	0.0	0.0	0.0	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	A	601	95.0	0.0	0.0	0.0	0.0	5.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	903	93.0	0.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	92.8	0.0	0.0	0.0	0.0	1.3	0.0
8 Sharpen Tolerant			209	94.0	0.0	0.0	0.0	0.0	0.0	3.0
Verdict (5.57 SC)	6.96 oz ai/a	A	309	87.0	7.0	3.0	0.0	0.0	5.0	5.0
Valor SX (51 WG)	2.04 oz ai/a	A	607	87.0	0.0	0.0	0.0	0.0	0.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	1007	83.0	0.0	3.0	0.0	0.0	0.0	5.0
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	87.8	1.8	1.5	0.0	0.0	1.3	4.5

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA
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	V1	V1	V1	V1	V1	V2	V2
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
9 Sharpen Tolerant		301	95.0	0.0	0.0	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	B 307	90.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 701	93.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1001	87.0	3.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	91.3	0.8	0.0	0.0	0.0
10 Sharpen Tolerant		303	95.0	0.0	3.0	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	B 507	95.0	0.0	0.0	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	B 801	90.0	3.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 1003	85.0	3.0	3.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B					
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	91.3	1.5	1.5	0.0	0.0
11 Sharpen Tolerant		105	92.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	B 405	87.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 611	85.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1011	90.0	3.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	88.5	0.8	0.0	0.0	0.0
12 Sharpen Tolerant		111	94.0	0.0	0.0	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	B 311	90.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 711	83.0	3.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 905	90.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	89.3	0.8	0.0	0.0	0.0

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014			
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA			
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	V1	V1	V1	V1	V1	V2	V2			
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4			
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1			
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1			
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	Plot	1	2	3	4	5	6	7
17 Sharpen Sensitive			104	87.0	0.0	0.0	0.0	0.0	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	A	408	95.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	604	93.0	0.0	5.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B	808	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	91.3	0.0	1.3	0.0	0.0	0.0	0.0
18 Sharpen Sensitive			108	86.0	5.0	0.0	0.0	0.0	7.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	A	504	94.0	0.0	0.0	0.0	0.0	7.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	A	708	90.0	5.0	0.0	0.0	0.0	5.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	902	93.0	0.0	0.0	0.0	0.0	3.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	90.8	2.5	0.0	0.0	0.0	5.5	0.0
19 Sharpen Sensitive			110	95.0	0.0	0.0	0.0	5.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A	404	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	610	85.0	5.0	5.0	0.0	0.0	5.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B	908	90.0	5.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	90.0	2.5	1.3	0.0	1.3	1.3	0.0
20 Sharpen Sensitive			202	94.0	0.0	0.0	0.0	0.0	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	A	510	91.0	0.0	5.0	0.0	0.0	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	710	92.0	0.0	3.0	0.0	0.0	3.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B	910	92.0	0.0	0.0	0.0	0.0	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	92.3	0.0	2.0	0.0	0.0	2.3	0.0

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA
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	V1	V1	V1	V1	V1	V2	V2
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
21 Sharpen Sensitive		204	95.0	0.0	0.0	3.0	3.0
Valor SX (51 WG)	2.04 oz ai/a	A 502	90.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 804	99.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1010	93.0	0.0	3.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	94.3	0.0	0.8	0.8	0.8
22 Sharpen Sensitive		208	93.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A 402	93.0	0.0	0.0	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	A 602	92.0	5.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 904	90.0	3.0	5.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B					
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	92.0	2.0	1.3	0.0	0.0
23 Sharpen Sensitive		210	92.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A 310	92.0	0.0	0.0	0.0	0.0
Valor SX (51 WG)	2.04 oz ai/a	A 608	95.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 1008	85.0	3.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B					
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	91.0	0.8	0.0	0.0	0.0
24 Sharpen Sensitive		302	92.0	3.0	0.0	3.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	B 308	87.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 702	90.0	5.0	5.0	3.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1002	90.0	3.0	3.0	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
		Mean =	89.8	2.8	2.0	2.3	0.0

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Crop Code			GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale			BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name			Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date			Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014
Rating Type			STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA
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			V1	V1	V1	V1	V1	V2	V2
Days After First/Last Applic.			29 14	29 14	29 14	29 14	29 14	40 4	40 4
Plant-Eval Interval			15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1
Days After Emergence			9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6	7
25 Sharpen Sensitive		304	89.0	0.0	0.0	0.0	0.0	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	B 508	95.0	0.0	0.0	0.0	0.0	5.0	3.0
Authority XL (70 WG)	5.6 oz ai/a	B 802	85.0	5.0	0.0	0.0	0.0	5.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 1004	87.0	0.0	0.0	0.0	0.0	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B							
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
		Mean =	89.0	1.3	0.0	0.0	0.0	2.5	0.8
26 Sharpen Sensitive		106	94.0	0.0	0.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	B 406	90.0	5.0	0.0	7.0	0.0	6.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 612	83.0	5.0	0.0	3.0	0.0	7.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1012	86.0	0.0	3.0	3.0	0.0	7.0	3.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	88.3	2.5	0.8	3.3	0.0	5.0	0.8
27 Sharpen Sensitive		112	93.0	0.0	0.0	0.0	0.0	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	B 312	95.0	0.0	0.0	0.0	0.0	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 712	90.0	0.0	0.0	0.0	0.0	3.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 906	90.0	0.0	0.0	0.0	0.0	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	92.0	0.0	0.0	0.0	0.0	1.5	0.0
28 Sharpen Sensitive		206	94.0	0.0	0.0	0.0	0.0	0.0	3.0
Valor SX (51 WG)	2.04 oz ai/a	B 512	95.0	0.0	0.0	0.0	0.0	0.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 606	90.0	5.0	7.0	0.0	0.0	3.0	7.0
AMS - Liquid	8.5 lb ai/100 gal	B 912	90.0	0.0	5.0	0.0	0.0	0.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C							
AMS - Liquid	8.5 lb ai/100 gal	C							
Roundup PowerMax 4.5 SL	18 oz ae/a	D							
AMS - Liquid	8.5 lb ai/100 gal	D							
		Mean =	92.3	1.3	3.0	0.0	0.0	0.8	5.0

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014			
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA			
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	V1	V1	V1	V1	V1	V2	V2			
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4			
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1			
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1			
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	Plot	1	2	3	4	5	6	7
29 Sharpen Sensitive			212	93.0	0.0	0.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	B	412	90.0	3.0	3.0	0.0	0.0	5.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	B	806	87.0	3.0	0.0	0.0	0.0	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	812	93.0	0.0	0.0	0.0	0.0	3.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	90.8	1.5	0.8	0.0	0.0	2.8	0.0
30 Sharpen Sensitive			306	92.0	5.0	0.0	0.0	0.0	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	B	506	86.0	0.0	0.0	5.0	0.0	5.0	0.0
Valor SX (51 WG)	2.04 oz ai/a	B	706	87.0	5.0	7.0	3.0	0.0	7.0	5.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	1006	90.0	4.0	5.0	5.0	0.0	7.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
			Mean =	88.8	3.5	3.0	3.3	0.0	4.8	1.3

Purdue University

				GLXMA	GLXMA	GLXMA	GLXMA	
				BSOY	BSOY	BSOY	BSOY	
				Glycine max	Glycine max	Glycine max	Glycine max	
				Soybean	Soybean	Soybean	Soybean	
				Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014	
				PHYCHL	PHYNEC	PHYSTU	YIELD	
				%	%	%	bu/ac	
Sample Size, Unit				1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples				1	1	1	1	
Crop Stage Majority				V2	V2	R1		
Days After First/Last Applic.				40 4	40 4	64 28	186 122	
Plant-Eval Interval				26 DP-1	26 DP-1	50 DP-1	172 DP-1	
Days After Emergence				20 DE-1	20 DE-1	44 DE-1	166 DE-1	
Trt No.	Treatment Name	Rate	Appl Code	Plot	8	9	10	11
		Rate Unit						
1	Sharpen Tolerant			101	0.0	0.0	0.0	81.40
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	409	0.0	0.0	0.0	63.50
	AMS - Liquid	8.5 lb ai/100 gal	B	703	0.0	0.0	0.0	52.80
	Roundup PowerMax 4.5 SL	18 oz ae/a	C	809	0.0	0.0	0.0	60.40
	AMS - Liquid	8.5 lb ai/100 gal	C					
	Roundup PowerMax 4.5 SL	18 oz ae/a	D					
	AMS - Liquid	8.5 lb ai/100 gal	D					
				Mean =	0.0	0.0	0.0	64.53
2	Sharpen Tolerant			103	5.0	0.0	0.0	62.50
	Sharpen 2.85 SC	0.71 oz ai/a	A	407	0.0	0.0	0.0	64.40
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	603	0.0	3.0	3.0	64.60
	AMS - Liquid	8.5 lb ai/100 gal	B	807	0.0	0.0	7.0	58.30
	Roundup PowerMax 4.5 SL	18 oz ae/a	C					
	AMS - Liquid	8.5 lb ai/100 gal	C					
	Roundup PowerMax 4.5 SL	18 oz ae/a	D					
	AMS - Liquid	8.5 lb ai/100 gal	D					
				Mean =	1.3	0.8	2.5	62.45
3	Sharpen Tolerant			107	7.0	0.0	0.0	63.50
	Sharpen 2.85 SC	0.71 oz ai/a	A	503	0.0	0.0	0.0	69.70
	Authority XL (70 WG)	5.6 oz ai/a	A	707	0.0	0.0	3.0	63.10
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	901	3.0	0.0	0.0	77.20
	AMS - Liquid	8.5 lb ai/100 gal	B					
	Roundup PowerMax 4.5 SL	18 oz ae/a	C					
	AMS - Liquid	8.5 lb ai/100 gal	C					
	Roundup PowerMax 4.5 SL	18 oz ae/a	D					
	AMS - Liquid	8.5 lb ai/100 gal	D					
				Mean =	2.5	0.0	0.8	68.38
4	Sharpen Tolerant			109	0.0	0.0	0.0	61.00
	Verdict (5.57 SC)	6.96 oz ai/a	A	403	0.0	0.0	0.0	64.90
	Roundup PowerMax 4.5 SL	18 oz ae/a	B	609	0.0	0.0	5.0	53.60
	AMS - Liquid	8.5 lb ai/100 gal	B	907	0.0	0.0	0.0	47.80
	Roundup PowerMax 4.5 SL	18 oz ae/a	C					
	AMS - Liquid	8.5 lb ai/100 gal	C					
	Roundup PowerMax 4.5 SL	18 oz ae/a	D					
	AMS - Liquid	8.5 lb ai/100 gal	D					
				Mean =	0.0	0.0	1.3	56.83

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYCHL	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1	1
Crop Stage Majority	V2	V2	R1	
Days After First/Last Applic.	40 4	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	Plot	
			8	9
			10	11
5 Sharpen Tolerant			201	0.0
Authority XL (70 WG)	5.6 oz ai/a	A	509	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	709	0.0
AMS - Liquid	8.5 lb ai/100 gal	B	909	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
			Mean =	0.0
6 Sharpen Tolerant			203	5.0
Valor SX (51 WG)	2.04 oz ai/a	A	501	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	803	0.0
AMS - Liquid	8.5 lb ai/100 gal	B	1009	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
			Mean =	1.3
7 Sharpen Tolerant			207	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A	401	0.0
Authority XL (70 WG)	5.6 oz ai/a	A	601	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	903	3.0
AMS - Liquid	8.5 lb ai/100 gal	B		0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
			Mean =	0.8
8 Sharpen Tolerant			209	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A	309	0.0
Valor SX (51 WG)	2.04 oz ai/a	A	607	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B	1007	0.0
AMS - Liquid	8.5 lb ai/100 gal	B		
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
			Mean =	0.0

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYCHL	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1	1
Crop Stage Majority	V2	V2	R1	
Days After First/Last Applic.	40 4	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code Plot	8	9
9 Sharpen Tolerant		301	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	B 307	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 701	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1001	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	0.8	0.0
10 Sharpen Tolerant		303	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	B 507	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	B 801	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 1003	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B		3.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	0.0	0.0
11 Sharpen Tolerant		105	7.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	B 405	3.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 611	3.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1011	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		5.0
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	3.3	0.0
12 Sharpen Tolerant		111	5.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	B 311	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 711	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 905	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		3.0
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	1.3	0.0

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Crop Code			GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale			BSOY	BSOY	BSOY	BSOY
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max
Crop Name			Soybean	Soybean	Soybean	Soybean
Rating Date			Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type			PHYCHL	PHYNEC	PHYSTU	YIELD
Rating Unit			%	%	%	bu/ac
Sample Size, Unit			1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples			1	1	1	1
Crop Stage Majority			V2	V2	R1	
Days After First/Last Applic.			40 4	40 4	64 28	186 122
Plant-Eval Interval			26 DP-1	26 DP-1	50 DP-1	172 DP-1
Days After Emergence			20 DE-1	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	8	9	10	11
13 Sharpen Tolerant		205	3.0	0.0	0.0	53.90
Valor SX (51 WG)	2.04 oz ai/a	B 511	0.0	3.0	0.0	54.70
Roundup PowerMax 4.5 SL	18 oz ae/a	B 605	0.0	0.0	3.0	52.60
AMS - Liquid	8.5 lb ai/100 gal	B 911	0.0	0.0	0.0	55.00
Roundup PowerMax 4.5 SL	18 oz ae/a	C				
AMS - Liquid	8.5 lb ai/100 gal	C				
Roundup PowerMax 4.5 SL	18 oz ae/a	D				
AMS - Liquid	8.5 lb ai/100 gal	D				
		Mean =	0.8	0.8	0.8	54.05
14 Sharpen Tolerant		211	3.0	0.0	0.0	53.00
Verdict (5.57 SC)	6.96 oz ai/a	B 411	0.0	0.0	7.0	56.80
Authority XL (70 WG)	5.6 oz ai/a	B 805	0.0	0.0	2.0	54.40
Roundup PowerMax 4.5 SL	18 oz ae/a	B 811	0.0	0.0	5.0	57.90
AMS - Liquid	8.5 lb ai/100 gal	B				
Roundup PowerMax 4.5 SL	18 oz ae/a	C				
AMS - Liquid	8.5 lb ai/100 gal	C				
Roundup PowerMax 4.5 SL	18 oz ae/a	D				
AMS - Liquid	8.5 lb ai/100 gal	D				
		Mean =	0.8	0.0	3.5	55.53
15 Sharpen Tolerant		305	0.0	0.0	0.0	53.30
Verdict (5.57 SC)	6.96 oz ai/a	B 505	0.0	0.0	0.0	50.10
Valor SX (51 WG)	2.04 oz ai/a	B 705	0.0	0.0	5.0	51.80
Roundup PowerMax 4.5 SL	18 oz ae/a	B 1005	0.0	0.0	3.0	59.30
AMS - Liquid	8.5 lb ai/100 gal	B				
Roundup PowerMax 4.5 SL	18 oz ae/a	C				
AMS - Liquid	8.5 lb ai/100 gal	C				
Roundup PowerMax 4.5 SL	18 oz ae/a	D				
AMS - Liquid	8.5 lb ai/100 gal	D				
		Mean =	0.0	0.0	2.0	53.63
16 Sharpen Sensitive		102	0.0	0.0	0.0	62.30
Roundup PowerMax 4.5 SL	18 oz ae/a	B 410	0.0	0.0	0.0	56.00
AMS - Liquid	8.5 lb ai/100 gal	B 704	0.0	0.0	0.0	49.60
Roundup PowerMax 4.5 SL	18 oz ae/a	C 810	0.0	0.0	0.0	61.20
AMS - Liquid	8.5 lb ai/100 gal	C				
Roundup PowerMax 4.5 SL	18 oz ae/a	D				
AMS - Liquid	8.5 lb ai/100 gal	D				
		Mean =	0.0	0.0	0.0	57.28

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYCHL	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1	1
Crop Stage Majority	V2	V2	R1	
Days After First/Last Applic.	40 4	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code Plot	8	9
17 Sharpen Sensitive		104	0.0	0.0
Sharpen 2.85 SC	0.71 oz ai/a	A 408	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 604	5.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 808	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	1.3	0.0
18 Sharpen Sensitive		108	7.0	3.0
Sharpen 2.85 SC	0.71 oz ai/a	A 504	0.0	0.0
Authority XL (70 WG)	5.6 oz ai/a	A 708	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 902	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B		
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	1.8	0.8
19 Sharpen Sensitive		110	3.0	3.0
Verdict (5.57 SC)	6.96 oz ai/a	A 404	5.0	3.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 610	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 908	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	2.0	1.5
20 Sharpen Sensitive		202	0.0	3.0
Authority XL (70 WG)	5.6 oz ai/a	A 510	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 710	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 910	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	0.0	0.8

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Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYCHL	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1	1
Crop Stage Majority	V2	V2	R1	
Days After First/Last Applic.	40 4	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code Plot	8	9
21 Sharpen Sensitive		204	7.0	0.0
Valor SX (51 WG)	2.04 oz ai/a	A 502	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 804	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B 1010	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	1.8	0.0
22 Sharpen Sensitive		208	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A 402	0.0	3.0
Authority XL (70 WG)	5.6 oz ai/a	A 602	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 904	0.0	3.0
AMS - Liquid	8.5 lb ai/100 gal	B		
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	0.0	1.5
23 Sharpen Sensitive		210	0.0	0.0
Verdict (5.57 SC)	6.96 oz ai/a	A 310	0.0	0.0
Valor SX (51 WG)	2.04 oz ai/a	A 608	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 1008	0.0	0.0
AMS - Liquid	8.5 lb ai/100 gal	B		
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	0.0	0.0
24 Sharpen Sensitive		302	5.0	3.0
Sharpen 2.85 SC	0.71 oz ai/a	B 308	0.0	0.0
Roundup PowerMax 4.5 SL	18 oz ae/a	B 702	0.0	5.0
AMS - Liquid	8.5 lb ai/100 gal	B 1002	0.0	3.0
Roundup PowerMax 4.5 SL	18 oz ae/a	C		
AMS - Liquid	8.5 lb ai/100 gal	C		
Roundup PowerMax 4.5 SL	18 oz ae/a	D		
AMS - Liquid	8.5 lb ai/100 gal	D		
		Mean =	1.3	2.8

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Crop Code				GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale				BSOY	BSOY	BSOY	BSOY
Crop Scientific Name				Glycine max	Glycine max	Glycine max	Glycine max
Crop Name				Soybean	Soybean	Soybean	Soybean
Rating Date				Jun-17-2014	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type				PHYCHL	PHYNEC	PHYSTU	YIELD
Rating Unit				%	%	%	bu/ac
Sample Size, Unit				1 PLOT	1 PLOT	1 PLOT	
Number of Subsamples				1	1	1	1
Crop Stage Majority				V2	V2	R1	
Days After First/Last Applic.				40 4	40 4	64 28	186 122
Plant-Eval Interval				26 DP-1	26 DP-1	50 DP-1	172 DP-1
Days After Emergence				20 DE-1	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	Plot	8	9	10	11
25 Sharpen Sensitive			304	3.0	0.0	0.0	65.10
Sharpen 2.85 SC	0.71 oz ai/a	B	508	0.0	0.0	0.0	55.20
Authority XL (70 WG)	5.6 oz ai/a	B	802	0.0	0.0	0.0	62.80
Roundup PowerMax 4.5 SL	18 oz ae/a	B	1004	0.0	0.0	3.0	53.20
AMS - Liquid	8.5 lb ai/100 gal	B					
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
			Mean =	0.8	0.0	0.8	59.08
26 Sharpen Sensitive			106	5.0	0.0	2.0	55.50
Verdict (5.57 SC)	6.96 oz ai/a	B	406	5.0	5.0	3.0	52.90
Roundup PowerMax 4.5 SL	18 oz ae/a	B	612	0.0	3.0	7.0	65.80
AMS - Liquid	8.5 lb ai/100 gal	B	1012	0.0	5.0	7.0	71.40
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
			Mean =	2.5	3.3	4.8	61.40
27 Sharpen Sensitive			112	5.0	3.0	0.0	80.20
Authority XL (70 WG)	5.6 oz ai/a	B	312	0.0	5.0	5.0	42.90
Roundup PowerMax 4.5 SL	18 oz ae/a	B	712	0.0	0.0	0.0	73.80
AMS - Liquid	8.5 lb ai/100 gal	B	906	0.0	0.0	0.0	53.40
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
			Mean =	1.3	2.0	1.3	62.58
28 Sharpen Sensitive			206	0.0	3.0	0.0	60.40
Valor SX (51 WG)	2.04 oz ai/a	B	512	0.0	5.0	0.0	62.60
Roundup PowerMax 4.5 SL	18 oz ae/a	B	606	0.0	0.0	0.0	54.20
AMS - Liquid	8.5 lb ai/100 gal	B	912	0.0	0.0	0.0	77.30
Roundup PowerMax 4.5 SL	18 oz ae/a	C					
AMS - Liquid	8.5 lb ai/100 gal	C					
Roundup PowerMax 4.5 SL	18 oz ae/a	D					
AMS - Liquid	8.5 lb ai/100 gal	D					
			Mean =	0.0	2.0	0.0	63.63

Purdue University

Verdict + PPO Tolerance - Sharpen Sensitive Soybean

Trial ID: 14S-THP-CTS-44
Location: Throckmorton
Project ID: MKD-H-2014-US-SH1-A-01.0

Protocol ID: 14S-THP-CTS-44
Study Director: Bill Johnson
Investigator: Dr. Bill Johnson
Sponsor Contact: BASF- Gery Welker

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

STASUB = stand - subjective / emergence

PHYSTU = phytotoxicity - stunting

PHYLMA = phytotoxicity - leaf malformation

PHYNEC = phytotoxicity - necrosis /burn

PHYCHL = phytotoxicity - chlorosis

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

PLOT = total plot

Plant-Eval Interval

15 DP-1 = 1 GLXMA May-22-2014

26 DP-1 = 1 GLXMA May-22-2014

50 DP-1 = 1 GLXMA May-22-2014

172 DP-1 = 1 GLXMA May-22-2014

Purdue University

Verdict + PPO Tolerance - Sharpen Sensitive Soybean

Trial ID: 14S-THP-CTS-44 Protocol ID: 14S-THP-CTS-44
 Location: Throckmorton Study Director: Bill Johnson
 Project ID: MKD-H-2014-US-SH1-A-01.0 Investigator: Dr. Bill Johnson
 Sponsor Contact: BASF- Gery Welker

Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014	Jun-17-2014		
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA	PHYCHL		
Rating Unit	%	%	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1	V1	V1	V2	V2	V2		
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4	40 4		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1	26 DP-1		
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1	20 DE-1		
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	1	2	3	4	5	6	7	8
1 Sharpen Tolerant			91.8 a	0.0 a	0.0 a	0.0 b	0.0 a	0.0 b	0.0 c	0.0 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
2 Sharpen Tolerant			89.5 a	2.3 a	0.8 a	0.0 b	0.0 a	0.0 b	1.3 bc	1.3 a
Sharpen 2.85 SC	0.71 oz ai/a	A								
Roundup PowerMax 4.5 SL	18 oz ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
3 Sharpen Tolerant			91.5 a	0.8 a	0.8 a	0.0 b	0.0 a	2.5 ab	0.0 c	2.5 a
Sharpen 2.85 SC	0.71 oz ai/a	A								
Authority XL (70 WG)	5.6 oz ai/a	A								
Roundup PowerMax 4.5 SL	18 oz ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								
4 Sharpen Tolerant			92.5 a	1.3 a	0.0 a	0.0 b	0.0 a	0.0 b	0.0 c	0.0 a
Verdict (5.57 SC)	6.96 oz ai/a	A								
Roundup PowerMax 4.5 SL	18 oz ae/a	B								
AMS - Liquid	8.5 lb ai/100 gal	B								
Roundup PowerMax 4.5 SL	18 oz ae/a	C								
AMS - Liquid	8.5 lb ai/100 gal	C								
Roundup PowerMax 4.5 SL	18 oz ae/a	D								
AMS - Liquid	8.5 lb ai/100 gal	D								

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Purdue University

Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Rating Date	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-6-2014	Jun-17-2014	Jun-17-2014	Jun-17-2014		
Rating Type	STASUB	PHYSTU	PHYLMA	PHYNEC	PHYCHL	PHYSTU	PHYLMA	PHYCHL			
Rating Unit	%	%	%	%	%	%	%	%	%		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Number of Subsamples	1	1	1	1	1	1	1	1	1		
Crop Stage Majority	V1	V1	V1	V1	V1	V2	V2	V2	V2		
Days After First/Last Applic.	29 14	29 14	29 14	29 14	29 14	40 4	40 4	40 4	40 4		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	15 DP-1	26 DP-1	26 DP-1	26 DP-1	26 DP-1		
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	9 DE-1	20 DE-1	20 DE-1	20 DE-1	20 DE-1		
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6	7	8
Rate Unit											
30	Sharpen Sensitive			88.8 a	3.5 a	3.0 a	3.3 a	0.0 a	4.8 ab	1.3 bc	2.3 a
	Verdict (5.57 SC)	6.96 oz ai/a	B								
	Valor SX (51 WG)	2.04 oz ai/a	B								
	Roundup PowerMax 4.5 SL	18 oz ae/a	B								
	AMS - Liquid	8.5 lb ai/100 gal	B								
	Roundup PowerMax 4.5 SL	18 oz ae/a	C								
	AMS - Liquid	8.5 lb ai/100 gal	C								
	Roundup PowerMax 4.5 SL	18 oz ae/a	D								
	AMS - Liquid	8.5 lb ai/100 gal	D								
	LSD (P=.05)			4.65	2.47	2.32	1.12	0.74	2.78	2.18	2.35
	Standard Deviation			3.29	1.75	1.64	0.79	0.52	1.96	1.54	1.67
	CV			3.63	155.29	192.63	249.48	786.2	126.0	124.21	175.28
	Bartlett's X2			15.85	9.35	10.513	1.887	0.747	8.57	9.438	7.86
	P(Bartlett's X2)			0.977	0.978	0.914	0.596	0.387	0.995	0.854	0.981
	Replicate F			8.360	4.393	3.950	0.374	1.941	2.492	2.078	14.758
	Replicate Prob(F)			0.0001	0.0063	0.0108	0.7721	0.1288	0.0654	0.1090	0.0001
	Treatment F			1.225	1.349	1.161	5.247	1.000	2.337	4.875	1.240
	Treatment Prob(F)			0.2336	0.1455	0.2919	0.0001	0.4798	0.0013	0.0001	0.2211

Purdue University

Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority	V2	R1	
Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt No.	Treatment Name	Rate	Appl Code
		Rate Unit	
9			
10			
11			
0.0 a		0.0 a	64.53 a
18 oz ae/a	B		
8.5 lb ai/100 gal	B		
18 oz ae/a	C		
8.5 lb ai/100 gal	C		
18 oz ae/a	D		
8.5 lb ai/100 gal	D		
0.8 a		2.5 a	62.45 a
0.71 oz ai/a	A		
18 oz ae/a	B		
8.5 lb ai/100 gal	B		
18 oz ae/a	C		
8.5 lb ai/100 gal	C		
18 oz ae/a	D		
8.5 lb ai/100 gal	D		
0.0 a		0.8 a	68.38 a
0.71 oz ai/a	A		
5.6 oz ai/a	A		
18 oz ae/a	B		
8.5 lb ai/100 gal	B		
18 oz ae/a	C		
8.5 lb ai/100 gal	C		
18 oz ae/a	D		
8.5 lb ai/100 gal	D		
0.0 a		1.3 a	56.83 a
6.96 oz ai/a	A		
18 oz ae/a	B		
8.5 lb ai/100 gal	B		
18 oz ae/a	C		
8.5 lb ai/100 gal	C		
18 oz ae/a	D		
8.5 lb ai/100 gal	D		

Purdue University

Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority	V2	R1	
Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			9 10 11
5 Sharpen Tolerant			0.8 a 3.3 a 61.78 a
Authority XL (70 WG)	5.6 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
6 Sharpen Tolerant			0.0 a 2.0 a 66.00 a
Valor SX (51 WG)	2.04 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
7 Sharpen Tolerant			0.0 a 1.3 a 62.33 a
Verdict (5.57 SC)	6.96 oz ai/a	A	
Authority XL (70 WG)	5.6 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
8 Sharpen Tolerant			0.0 a 1.5 a 59.18 a
Verdict (5.57 SC)	6.96 oz ai/a	A	
Valor SX (51 WG)	2.04 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
9 Sharpen Tolerant			0.0 a 0.0 a 68.43 a
Sharpen 2.85 SC	0.71 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	

Purdue University

Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority	V2	R1	
Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			9 10 11
10 Sharpen Tolerant			0.0 a 2.0 a 61.88 a
Sharpen 2.85 SC	0.71 oz ai/a	B	
Authority XL (70 WG)	5.6 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
11 Sharpen Tolerant			0.0 a 3.3 a 62.50 a
Verdict (5.57 SC)	6.96 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
12 Sharpen Tolerant			0.0 a 2.0 a 56.23 a
Authority XL (70 WG)	5.6 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
13 Sharpen Tolerant			0.8 a 0.8 a 54.05 a
Valor SX (51 WG)	2.04 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
14 Sharpen Tolerant			0.0 a 3.5 a 55.53 a
Verdict (5.57 SC)	6.96 oz ai/a	B	
Authority XL (70 WG)	5.6 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	

Purdue University

Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority	V2	R1	
Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt No. Name	Rate	Appl Code	
	Rate Unit		
15 Sharpen Tolerant			9 10 11
Verdict (5.57 SC)	6.96 oz ai/a	B	0.0 a 2.0 a 53.63 a
Valor SX (51 WG)	2.04 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
16 Sharpen Sensitive			0.0 a 0.0 a 57.28 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
17 Sharpen Sensitive			0.0 a 0.8 a 61.90 a
Sharpen 2.85 SC	0.71 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
18 Sharpen Sensitive			0.8 a 2.0 a 59.88 a
Sharpen 2.85 SC	0.71 oz ai/a	A	
Authority XL (70 WG)	5.6 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
19 Sharpen Sensitive			1.5 a 1.3 a 60.45 a
Verdict (5.57 SC)	6.96 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
20 Sharpen Sensitive			0.8 a 2.5 a 56.50 a
Authority XL (70 WG)	5.6 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	

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Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority	V2	R1	
Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
21 Sharpen Sensitive			9 10 11
Valor SX (51 WG)	2.04 oz ai/a	A	0.0 a 2.0 a 65.43 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
22 Sharpen Sensitive			1.5 a 2.0 a 71.38 a
Verdict (5.57 SC)	6.96 oz ai/a	A	
Authority XL (70 WG)	5.6 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
23 Sharpen Sensitive			0.0 a 1.3 a 58.63 a
Verdict (5.57 SC)	6.96 oz ai/a	A	
Valor SX (51 WG)	2.04 oz ai/a	A	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
24 Sharpen Sensitive			2.8 a 1.0 a 58.08 a
Sharpen 2.85 SC	0.71 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
25 Sharpen Sensitive			0.0 a 0.8 a 59.08 a
Sharpen 2.85 SC	0.71 oz ai/a	B	
Authority XL (70 WG)	5.6 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	

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Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	Jun-17-2014	Jul-11-2014	Nov-10-2014
Rating Type	PHYNEC	PHYSTU	YIELD
Rating Unit	%	%	bu/ac
Sample Size, Unit	1 PLOT	1 PLOT	
Number of Subsamples	1	1	1
Crop Stage Majority	V2	R1	
Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
26 Sharpen Sensitive			
Verdict (5.57 SC)	6.96 oz ai/a	B	3.3 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
27 Sharpen Sensitive			
Authority XL (70 WG)	5.6 oz ai/a	B	2.0 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
28 Sharpen Sensitive			
Valor SX (51 WG)	2.04 oz ai/a	B	2.0 a
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
29 Sharpen Sensitive			
Verdict (5.57 SC)	6.96 oz ai/a	B	1.3 a
Authority XL (70 WG)	5.6 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	

Purdue University

Crop Code	GLXMA	GLXMA	GLXMA
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Crop Scientific Name	Glycine max	Glycine max	Glycine max
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Days After First/Last Applic.	40 4	64 28	186 122
Plant-Eval Interval	26 DP-1	50 DP-1	172 DP-1
Days After Emergence	20 DE-1	44 DE-1	166 DE-1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
		9	10
		11	
30 Sharpen Sensitive		1.3 a	2.0 a
Verdict (5.57 SC)	6.96 oz ai/a	B	53.55 a
Valor SX (51 WG)	2.04 oz ai/a	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	B	
AMS - Liquid	8.5 lb ai/100 gal	B	
Roundup PowerMax 4.5 SL	18 oz ae/a	C	
AMS - Liquid	8.5 lb ai/100 gal	C	
Roundup PowerMax 4.5 SL	18 oz ae/a	D	
AMS - Liquid	8.5 lb ai/100 gal	D	
LSD (P=.05)		1.84	2.80
Standard Deviation		1.30	1.98
CV		202.34	120.67
Bartlett's X2		3.579	14.508
P(Bartlett's X2)		0.99	0.952
Replicate F		1.600	4.278
Replicate Prob(F)		0.1952	0.0073
Treatment F		1.981	1.264
Treatment Prob(F)		0.0080	0.2021

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Verdict + PPO Tolerance - Sharpen Sensitive Soybean

Trial ID: 14S-THP-CTS-44 Protocol ID: 14S-THP-CTS-44
Location: Throckmorton Study Director: Bill Johnson
Project ID: MKD-H-2014-US-SH1-A-01.0 Investigator: Dr. Bill Johnson
Sponsor Contact: BASF- Gery Welker

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

STASUB = stand - subjective / emergence

PHYSTU = phytotoxicity - stunting

PHYLMA = phytotoxicity - leaf malformation

PHYNEC = phytotoxicity - necrosis /burn

PHYCHL = phytotoxicity - chlorosis

YIELD = yield

Rating Unit

% = percent

bu/ac = bushels per acre

PLOT = total plot

Plant-Eval Interval

15 DP-1 = 1 GLXMA May-22-2014

26 DP-1 = 1 GLXMA May-22-2014

50 DP-1 = 1 GLXMA May-22-2014

172 DP-1 = 1 GLXMA May-22-2014