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Prefix + Sharpen, Boundry + Sharpen, and Gramoxone + Sharpen for burndown of glyphosate-tolerant marestail in no-till soybean

Trial ID: 10S-SEP-NTS-42 Protocol ID: 10S-SEP-NTS-42
Location: SEPAC Study Director: Paul Marquardt/Mike White
Project ID: Investigator: Dr. Bill Johnson
Sponsor Contact: Steve Mroczkiewicz

General Trial Information

Study Director: Paul Marquardt/Mike White **Title:** Research Associate
Investigator: Dr. William G. Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 3-10-2010

Trial Location

City: Butlerville
State/Prov.: IN
Postal Code: 47223-0216
Country: USA

Personnel

Study Director: Paul Marquardt/Mike White **Title:** Research Associate
Affiliation: Purdue University
Address: 915 W. State St., Botany and Plant Pathology
Location: West Lafayette, IN
Postal Code: 47907 **E-mail:** pmarquar@purdue.edu
Phone No.: 765-494-4621 **Mobile No.:** 765-409-6369
Investigator: Dr. William G. Johnson **Title:** Professor
Affiliation: Purdue University
Address: 915 W. State St.
Location: West Lafayette, IN USA
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Phone No.: 765-494-4656

Cooperator/Landowner

Cooperator: Southeastern-Purdue Ag Center **Role:** Cooperator
Organization: Purdue University
Address 1: 4425 E Co. Rd. 350 N
Phone No.: 1-812-458-6977
City: Butlerville **Fax No.:** 1-812-458-6979
State/Prov: IN
Postal Code: 477223-021 **E-mail:** biehled@purdue.edu
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG2939 **Description:** Roundup Ready
BBCH Scale: BSOY **Planting Date:** 5-10-2010
Planting Method: DIRDRI direct drilled **Rate, Unit:** 161000 S/A
Depth, Unit: 1.0 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 57 F
Soil Moisture: SLIWET slightly wet **Emergence Date:** 5-19-2010
Harvest Date: 11-11-2010 **Harvest Equipment:** Gleaner F3
Harvested Width, Unit: 10 FT **Harvested Length, Unit:** 25 FT
% Standard Moisture: 13.0 **Moisture Meter:** Carter 3" Blade
Weighing Equipment: Carter Double Bucket

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Pest Description

Pest 1 Type: W **Code:** ALOCA Alopecurus carolinianus
Common Name: Carolina foxtail

Pest 2 Type: W **Code:** SENGL Senecio glabellus
Common Name: Cressleaf groundsel

Pest 3 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion

Pest 4 Type: W **Code:** ALLVI Allium vineale
Common Name: Wild garlic

Pest 5 Type: W **Code:** RANAB Ranunculus abortivus
Common Name: Smallflower buttercup

Pest 6 Type: W **Code:** VENSS Vernonia sp.
Common Name: Iromweed

Pest 7 Type: W **Code:** FESAR Festuca arundinacea
Common Name: Tall fescue

Pest 8 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Pest 9 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest10 Type: W **Code:** IPOHE Ipomoea hederacea
Common Name: Ivyleaf morningglory

Pest11 Type: W **Code:** ERICA Conyza canadensis
Common Name: Canada horseweed

Pest12 Type: W **Code:** SOLCA Solanum carolinense
Common Name: Horsenettle

Pest13 Type: W **Code:** DIGSA Digitaria sanguinalis
Common Name: Large crabgrass

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: SEPAC Field U4-6
% OM: 1.8 **Texture:** SIL silt loam
pH: 5.6 **Soil Name:** Avonburg
CEC: 6.7

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Application Description

	A	B	C
Application Date:	5-6-2010	6-13-2010	6-23-2010
Time of Day:	12:30-1	9	9
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	7 DPP	EAPOWE	MIPOWE
Application Placement:	FOLIAR	FOLIAR	FOLIAR
Applied By:	PM	RH	RH
Air Temperature, Unit:	66 F	80 F	84 F
% Relative Humidity:	38	80	73
Wind Velocity, Unit:	5 MPH	2 MPH	1.4 MPH
Wind Direction:	W	S	SW
Dew Presence (Y/N):	N no	Y yes	Y yes
Soil Temperature, Unit:	70 F		
Soil Moisture:	DRY	MOIST	MOIST
% Cloud Cover:	5	20	20

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		V4	V4 50
Stage Minimum, Percent:			V4 50
Stage Maximum, Percent:		V4	R1 50
Height, Unit:		8 IN	10 IN
Height Minimum, Maximum:			8

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ALOCA W	ALOCA W	ALOCA W
Stage Majority, Percent:	40 100		
Height, Unit:	5.5 IN		
Height Minimum, Maximum:	3 8		
Density, Unit:	0.5 YD2		
Pest 2 Code, Type, Scale:	SENGL W	SENGL W	SENGL W
Stage Majority, Percent:	40 100		
Height, Unit:	11 IN		
Height Minimum, Maximum:	4 18		
Density, Unit:	5.5 YD2		
Pest 3 Code, Type, Scale:	TAROF W	TAROF W	TAROF W
Stage Majority, Percent:	40 80	65	65
Stage Minimum, Percent:	ROSET 20		
Stage Maximum, Percent:	40 80		
Height, Unit:	7.5 IN	8 IN	8 IN
Height Minimum, Maximum:	3 12	2 12	2 12
Density, Unit:	20.5 YD2	18 YD2	18 YD2
Pest 4 Code, Type, Scale:	ALLVI W	ALLVI W	ALLVI W
Stage Majority, Percent:	40 100		
Height, Unit:	21 IN		
Height Minimum, Maximum:	6 36		
Density, Unit:	13 YD2		
Pest 5 Code, Type, Scale:	RANAB W	RANAB W	RANAB W
Stage Majority, Percent:	40 100		
Height, Unit:	6 IN		
Height Minimum, Maximum:	4 8		
Density, Unit:	0.5 YD2		
Pest 6 Code, Type, Scale:	VENSS W	VENSS W	VENSS W
Stage Majority, Percent:	65 100	65	65
Height, Unit:	15 IN	30 IN	30 IN
Height Minimum, Maximum:	6 24	18 36	18 36
Density, Unit:	3 YD2	3 YD2	3 YD2
Pest 7 Code, Type, Scale:	FESAR W	FESAR W	FESAR W
Stage Minimum, Percent:	40 50		
Stage Maximum, Percent:	65 50		
Height, Unit:	18 IN		
Height Minimum, Maximum:	12 24		
Density, Unit:	3 YD2		
Pest 8 Code, Type, Scale:	ECHCG W	ECHCG W	ECHCG W
Pest 9 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Pest10 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Pest11 Code, Type, Scale:	ERICA W	ERICA W	ERICA W
Pest12 Code, Type, Scale:	SOLCA W	SOLCA W	SOLCA W
Pest13 Code, Type, Scale:	DIGSA W	DIGSA W	DIGSA W

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Application Equipment

	A	B	C
Appl. Equipment:	CO2 Backpack	CO2 Backpack	CO2 Backpack
Equipment Type:	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	17 PSI	17 PSI	17 PSI
Nozzle Type:	Flat Fan	Flat Fan	Flat Fan
Nozzle Size:	XR11002	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN	15 IN
Nozzles/Row:	8	8	8
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	H2O	H2O	H2O
Water Hardness (ppm CaCO3):	150	150	150
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	1.8 Liters	1.8 Liters	1.8 Liters
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):	N no	N no	N no

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Prefix + Sharpen, Boundry + Sharpen, and Gramoxone + Sharpen for burndown of glyphosate-tolerant marestail in no-till soybean

Trial ID: 10S-SEP-NTS-42 Protocol ID: 10S-SEP-NTS-42
Location: SEPAC Study Director: Paul Marquardt/Mike White
Project ID: Investigator: Dr. Bill Johnson
Sponsor Contact: Steve Mroczkiewicz

Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5	6	7
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				TAROF	ALLVI	SENGL	VENAL	TAROF	SENGL	VENAL
	Pest Scientific Name				Taraxacum offi>	Allium vineale	Senecio glabel>	Vernonia altis>	Taraxacum offi>	Senecio glabel>	Vernonia altis>
	Pest Name				Common dandeli>	Wild garlic	Cressleaf grou>	Tall ironweed	Common dandeli>	Cressleaf grou>	Tall ironweed
	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
	Crop Variety				AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939
	Description										
	Rating Date				5-10-2010	5-10-2010	5-10-2010	5-10-2010	5-19-2010	5-19-2010	5-19-2010
	Rating Type				CONTRO	PHYGEN	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO
	Rating Unit				%	%	%	%	%	%	%
	Number of Subsamples				1	1	1	1	1	1	1
	Crop Stage Majority										
	Pest Stage Majority				3-12"	3-36"	5-30"	5-30"	1-15"	0-5"	
	Pest Density, Unit				17.5YD2	10.5YD2	2.5 YD2	12.5YD2	8 YD2	7.5 YD2	12 YD2
	Assessed By				CB/JESS	CB/JESS	CB/JESS	CB/JESS	RH	RH	RH
1	UNTREATED				0.0 c	0.0 e	0.0 b	0.0 c	0.0 b	0.0 b	0.0 b
2	Prefix	1.33	lb ai/a	A	26.3 b	32.5 d	78.3 a	21.3 b	71.5 a	92.5 a	65.0 a
	Touchdown Total	0.78	lb ae/a	A							
	N-Pak AMS	8.5	lb ai/100 gal	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb ai/100 gal	C							
3	Prefix	1.33	lb ai/a	A	33.8 b	55.8 c	98.8 a	81.0 a	97.5 a	100.0 a	100.0 a
	Sharpen	0.0223	lb ai/a	A							
	Touchdown Total	0.78	lb ae/a	A							
	MSO	1	% v/v	A							
	N-Pak AMS	8.5	lb ai/100 gal	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb/100 gal	C							
4	Boundary	1.22	lb ai/a	A	41.3 b	62.5 bc	99.3 a	80.0 a	97.8 a	100.0 a	100.0 a
	Sharpen	0.0223	lb ai/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	A							
	N-Pak AMS	8.5	lb ai/100 gal	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb ai/100 gal	C							
5	Gramoxone Inteon	0.75	lb ai/a	A	93.5 a	88.3 ab	100.0 a	98.8 a	91.3 a	100.0 a	100.0 a
	2,4-D Ester	1	lb ae/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	B							
	N-Pak AMS	8.5	lb ai/100 gal	B							
6	Gramoxone Inteon	0.75	lb ai/a	A	95.3 a	88.8 ab	99.8 a	97.3 a	90.3 a	100.0 a	99.3 a
	Sharpen	0.0223	lb ai/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	B							
	N-Pak AMS	8.5	lb ai/100 gal	B							

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Pest Type			W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code			TAROF	ALLVI	SENGL	VENAL	TAROF	SENGL	VENAL
Pest Scientific Name			Taraxacum offi>	Allium vineale	Senecio glabel>	Vernonia altis>	Taraxacum offi>	Senecio glabel>	Vernonia altis>
Pest Name			Common dandeli>	Wild garlic	Cressleaf grou>	Tall ironweed	Common dandeli>	Cressleaf grou>	Tall ironweed
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
Crop Variety			AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939
Description									
Rating Date			5-10-2010	5-10-2010	5-10-2010	5-10-2010	5-19-2010	5-19-2010	5-19-2010
Rating Type			CONTRO	PHYGEN	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit			%	%	%	%	%	%	%
Number of Subsamples			1	1	1	1	1	1	1
Crop Stage Majority									
Pest Stage Majority			3-12"	3-36"	5-30"	5-30"	1-15"	0-5"	
Pest Density, Unit			17.5YD2	10.5YD2	2.5 YD2	12.5YD2	8 YD2	7.5 YD2	12 YD2
Assessed By			CB/JESS	CB/JESS	CB/JESS	CB/JESS	RH	RH	RH
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	2	3	4	5	6	7
7	Gramoxone Inteon	0.75	lb ai/a	A	81.5 a	96.8 a	99.8 a	96.8 a	87.0 a	100.0 a	100.0 a
	Prefix	1.33	lb ai/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb ai/100 gal	C							
LSD (P=.05)					22.15	23.05	18.59	13.43	22.63	8.42	23.25
Standard Deviation					14.91	15.52	12.51	9.04	15.23	5.67	15.65
CV					28.09	25.59	15.21	13.32	19.92	6.7	19.41
Bartlett's X2					16.377	20.455	62.161	31.667	29.049	0.0	15.366
P(Bartlett's X2)					0.006*	0.001*	0.001*	0.001*	0.001*	.	0.001*
Replicate F					1.964	0.265	0.906	1.066	2.306	1.000	0.952
Replicate Prob(F)					0.1556	0.8495	0.4576	0.3882	0.1112	0.4155	0.4364
Treatment F					24.814	20.361	35.213	79.508	20.934	174.333	23.397
Treatment Prob(F)					0.0001	0.0001	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.

Column 1: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; 3-12"; per square yard; CB/JESS
Column 2: Weed or volunteer crop; US; US; AG 2939; phytotoxicity - general / injury; percent; 3-36"; per square yard; CB/JESS
Column 3: Weed or volunteer crop; US; US; AG 2939; phytotoxicity - general / injury; percent; 5-30"; per square yard; CB/JESS
Column 4: Weed or volunteer crop; US; US; AG 2939; phytotoxicity - general / injury; percent; 5-30"; per square yard; CB/JESS
Column 5: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; 1-15"; per square yard; RH
Column 6: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; 0-5"; per square yard; RH
Column 7: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; per square yard; RH
Column 8: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; V3; 3-10"; per square yard; JR
Column 9: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; V3; 1-6"; per square yard; JR
Column 10: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; V3; 6-36"; per square yard; JR
Column 11: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; R3; 36"; per square yard; RH
Column 12: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; R3; 36"; per square yard; RH
Column 13: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; R3; 6-12"; per square yard; RH
Column 14: Weed or volunteer crop; US; US; AG 2939; control / burndown or knockdown; percent; R3; 4-48"; per square yard; RH
Column 15: US; AG 2939; yield; pound
Column 16: US; AG 2939; MOISTURE; percent
Column 17: US; AG 2939; yield; bushel

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	8	9	10	11	12	13	14
	Pest Type				W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
	Pest Code				TAROF	SENGL	VENAL	ECHCG	SETVI	TAROF	VENAL
	Pest Scientific Name				Taraxacum offi>	Senecio glabel>	Vernonia altis>	Echinochloa cr>	Setaria viridis	Taraxacum offi>	Vernonia altis>
	Pest Name				Common dandeli>	Cressleaf grou>	Tall ironweed	Common barnyar>	Green foxtail	Common dandeli>	Tall ironweed
	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
	Crop Variety				AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939
	Description				4-8" BEANS	4-8" BEANS	4-8" BEANS				
	Rating Date				6-17-2010	6-17-2010	6-17-2010	7-14-2010	7-14-2010	7-14-2010	7-14-2010
	Rating Type				CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
	Rating Unit				%	%	%	%	%	%	%
	Number of Subsamples				1	1	1	1	1	1	1
	Crop Stage Majority				V3	V3	V3	R3	R3	R3	R3
	Pest Stage Majority				3-10"	1-6"	6-36"	36"	36"	6-12"	4-48"
	Pest Density, Unit				12.5YD2	1 YD2	3 YD2	20 YD2	20 YD2	5 YD2	4.5 YD2
	Assessed By				JR	JR	JR	RH	RH	RH	RH
1	UNTREATED				0.0 b	0.0 b	0.0 d	0.0 c	0.0 b	0.0 b	0.0 c
2	Prefix	1.33	lb ai/a	A	50.0 a	100.0 a	73.8 b	97.3 ab	98.0 a	95.8 a	95.0 a
	Touchdown Total	0.78	lb ae/a	A							
	N-Pak AMS	8.5	lb ai/100 gal	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb ai/100 gal	C							
3	Prefix	1.33	lb ai/a	A	53.8 a	100.0 a	93.8 a	96.0 ab	96.0 a	91.5 a	98.8 a
	Sharpen	0.0223	lb ai/a	A							
	Touchdown Total	0.78	lb ae/a	A							
	MSO	1	% v/v	A							
	N-Pak AMS	8.5	lb ai/100 gal	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb/100 gal	C							
4	Boundary	1.22	lb ai/a	A	24.5 ab	100.0 a	68.8 b	95.0 ab	95.0 a	79.5 a	98.8 a
	Sharpen	0.0223	lb ai/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	A							
	N-Pak AMS	8.5	lb ai/100 gal	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb ai/100 gal	C							
5	Gramoxone Inteon	0.75	lb ai/a	A	46.3 a	100.0 a	100.0 a	88.8 b	88.8 a	95.3 a	99.0 a
	2,4-D Ester	1	lb ae/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	B							
	N-Pak AMS	8.5	lb ai/100 gal	B							
6	Gramoxone Inteon	0.75	lb ai/a	A	26.3 ab	100.0 a	30.0 c	90.0 ab	90.0 a	74.0 a	84.0 b
	Sharpen	0.0223	lb ai/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	B							
	N-Pak AMS	8.5	lb ai/100 gal	B							

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Pest Type					W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code					TAROF	SENGL	VENAL	ECHCG	SETVI	TAROF	VENAL
Pest Scientific Name					Taraxacum offi>	Senecio glabel>	Vernonia altis>	Echinochloa cr>	Setaria viridis	Taraxacum offi>	Vernonia altis>
Pest Name					Common dandeli>	Cressleaf grou>	Tall ironweed	Common barnyar>	Green foxtail	Common dandeli>	Tall ironweed
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
Crop Variety					AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939	AG 2939
Description					4-8" BEANS	4-8" BEANS	4-8" BEANS				
Rating Date					6-17-2010	6-17-2010	6-17-2010	7-14-2010	7-14-2010	7-14-2010	7-14-2010
Rating Type					CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit					%	%	%	%	%	%	%
Number of Subsamples					1	1	1	1	1	1	1
Crop Stage Majority					V3	V3	V3	R3	R3	R3	R3
Pest Stage Majority					3-10"	1-6"	6-36"	36"	36"	6-12"	4-48"
Pest Density, Unit					12.5YD2	1 YD2	3 YD2	20 YD2	20 YD2	5 YD2	4.5 YD2
Assessed By					JR	JR	JR	RH	RH	RH	RH
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	8	9	10	11	12	13	14
7	Gramoxone Inteon	0.75	lb ai/a	A	48.8 a	100.0 a	37.5 c	98.0 a	98.0 a	93.3 a	93.8 a
	Prefix	1.33	lb ai/a	A							
	MSO	1	% v/v	A							
	Touchdown Total	0.78	lb ae/a	C							
	N-Pak AMS	8.5	lb ai/100 gal	C							
LSD (P=.05)					25.64	0.00	17.86	6.09	6.15	20.11	7.77
Standard Deviation					17.26	0.00	12.02	4.10	4.14	13.53	5.23
CV					48.42	0.0	20.84	5.08	5.12	17.9	6.43
Bartlett's X2					6.049	0.0	3.241	11.73	7.514	18.437	15.429
P(Bartlett's X2)					0.301	.	0.518	0.019*	0.057	0.002*	0.009*
Replicate F					4.307	0.000	0.072	1.180	0.909	1.684	0.517
Replicate Prob(F)					0.0186	1.0000	0.9741	0.3450	0.4562	0.2061	0.6758
Treatment F					5.151	0.000	36.799	304.917	299.963	25.804	192.299
Treatment Prob(F)					0.0031	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	15	16	17
	Pest Type						
	Pest Code						
	Pest Scientific Name						
	Pest Name						
	Crop Code				GLXMA	GLXMA	GLXMA
	BBCH Scale				BSOY	BSOY	BSOY
	Crop Scientific Name				Glycine max	Glycine max	Glycine max
	Crop Name				Soybean	Soybean	Soybean
	Crop Variety				AG 2939	AG 2939	AG 2939
	Description						
	Rating Date				11-11-2010	11-11-2010	11-11-2010
	Rating Type				YIELD	MOISTURE	YIELD
	Rating Unit				LB	%	BU
	Number of Subsamples				1	1	1
	Crop Stage Majority						
	Pest Stage Majority						
	Pest Density, Unit						
	Assessed By						
1	UNTREATED				14.0580916 b	9.7373104 a	42.4 b
2	Prefix	1.33	lb ai/a	A	17.5026129 ab	9.8142157 a	52.7 ab
	Touchdown Total	0.78	lb ae/a	A			
	N-Pak AMS	8.5	lb ai/100 gal	A			
	Touchdown Total	0.78	lb ae/a	C			
	N-Pak AMS	8.5	lb ai/100 gal	C			
3	Prefix	1.33	lb ai/a	A	16.7087610 ab	10.0285178 a	50.2 ab
	Sharpen	0.0223	lb ai/a	A			
	Touchdown Total	0.78	lb ae/a	A			
	MSO	1	% v/v	A			
	N-Pak AMS	8.5	lb ai/100 gal	A			
	Touchdown Total	0.78	lb ae/a	C			
	N-Pak AMS	8.5	lb/100 gal	C			
4	Boundary	1.22	lb ai/a	A	15.9283597 ab	9.9053078 a	47.9 ab
	Sharpen	0.0223	lb ai/a	A			
	MSO	1	% v/v	A			
	Touchdown Total	0.78	lb ae/a	A			
	N-Pak AMS	8.5	lb ai/100 gal	A			
	Touchdown Total	0.78	lb ae/a	C			
	N-Pak AMS	8.5	lb ai/100 gal	C			
5	Gramoxone Inteon	0.75	lb ai/a	A	15.8476273 ab	9.9690218 a	47.6 ab
	2,4-D Ester	1	lb ae/a	A			
	MSO	1	% v/v	A			
	Touchdown Total	0.78	lb ae/a	B			
	N-Pak AMS	8.5	lb ai/100 gal	B			
6	Gramoxone Inteon	0.75	lb ai/a	A	17.8120841 ab	9.9441576 a	53.5 ab
	Sharpen	0.0223	lb ai/a	A			
	MSO	1	% v/v	A			
	Touchdown Total	0.78	lb ae/a	B			
	N-Pak AMS	8.5	lb ai/100 gal	B			

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Pest Type							
Pest Code							
Pest Scientific Name							
Pest Name							
Crop Code					GLXMA	GLXMA	GLXMA
BBCH Scale					BSOY	BSOY	BSOY
Crop Scientific Name					Glycine max	Glycine max	Glycine max
Crop Name					Soybean	Soybean	Soybean
Crop Variety					AG 2939	AG 2939	AG 2939
Description							
Rating Date					11-11-2010	11-11-2010	11-11-2010
Rating Type					YIELD	MOISTURE	YIELD
Rating Unit					LB	%	BU
Number of Subsamples					1	1	1
Crop Stage Majority							
Pest Stage Majority							
Pest Density, Unit							
Assessed By							
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	15	16	17
7	Gramoxone Inteon	0.75	lb ai/a	A	18.0677298 a	9.8508654 a	54.4 a
	Prefix	1.33	lb ai/a	A			
	MSO	1	% v/v	A			
	Touchdown Total	0.78	lb ae/a	C			
	N-Pak AMS	8.5	lb ai/100 gal	C			
LSD (P=.05)					2.52713729	0.34520707	7.52
Standard Deviation					1.70105272	0.23236387	5.06
CV					10.27	2.35	10.17
Bartlett's X2					6.114	3.646	5.975
P(Bartlett's X2)					0.411	0.725	0.426
Replicate F					4.830	0.210	4.945
Replicate Prob(F)					0.0123	0.8881	0.0112
Treatment F					2.746	0.730	2.785
Treatment Prob(F)					0.0449	0.6318	0.0428