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2,4-D Rates and Timing EPP in no-till soybeans.

Trial ID: 10S-THP-NTS-87 Protocol ID: 10S-THP-NTS-87
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact: Winfield Solutions - George Watters

General Trial Information

Study Director: White/Marquardt **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 4-13-2010

Trial Location

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

Objectives:

2,4-D Rates and Timing EPP in no-till soybeans.

Personnel

Study Director: White/Marquardt **Title:** Research Associate
Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** mdwhite@purdue.edu
Phone No.: 765-494-0891

Investigator: Dr. Bill Johnson **Title:** Professor
Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Phone No.: 765-494-4656 **Mobile No.:** 765-404-9801

Cooperator/Landowner

Cooperator: Throckmorton Purdue Ag Center **Role:** Purdue Ag Center
Organization: Purdue University
Address 1: 8343 US 231 S
City: Lafayette **Phone No.:** 765-538-3422
State/Prov.: IN **Fax No.:** 765-538-3423
Postal Code: 47909 **E-mail:** jayyoung@purdue.edu
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow AG2939 **Description:** RR2
BBCH Scale: BSOY **Planting Date:** 5-27-2010
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 71 F
Soil Moisture: DRY dry **Emergence Date:** 6-2-2010

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Pest Description

Pest 1 Type: W **Code:** BROTE *Bromus tectorum*
Common Name: Downy brome

Pest 2 Type: W **Code:** THLSS *Thlaspi* sp.
Common Name: Pennycress

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

Pest 4 Type: W **Code:** GALAP *Galium aparine*
Common Name: Catchweed bedstraw

Pest 5 Type: W **Code:** COIMA *Conium maculatum*
Common Name: Poison hemlock

Pest 6 Type: W **Code:** LACSE *Lactuca serriola*
Common Name: Prickly lettuce

Pest 7 Type: W **Code:** STEME *Stellaria media*
Common Name: Common chickweed

Pest 8 Type: W **Code:** CRUNU *Carduus nutans*
Common Name: Musk thistle

Pest 9 Type: W **Code:** TRFPR *Trifolium pratense*
Common Name: Red clover

Pest10 Type: W **Code:** TRODM *Tragopogon dubius major*
Common Name: Western salsify

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

Soil Description

Description Name: TPAC - Field 5
% OM: 2.3 **Texture:** SIL silt loam
pH: 6.6 **Soil Name:** Longlois
CEC: 9.9

Application Description

	A	B	C
Application Date:	5-4-2010	5-12-2010	5-27-2010
Time of Day:	9-9:20	8:40-8:50	9-9:30 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	14 EA	7 EPP	ATPLAN
Application Placement:	FOLIAR	FOLIAR	FOLIAR
Applied By:	MH	RT	MH
Air Temperature, Unit:	63.2 F	63 F	76 F
% Relative Humidity:	71.9	100	73
Wind Velocity, Unit:	2 MPH	1 MPH	1.7 MPH
Wind Direction:	SW	SW	SE
Dew Presence (Y/N):	Y yes	Y yes	N no
Soil Temperature, Unit:	60 F	63 F	71 F
Soil Moisture:	MOIST	MOIST	DRY
% Cloud Cover:	15	100	73

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Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY

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Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	BROTE W	BROTE W	BROTE W
Stage Majority, Percent:		40 100	
Height, Unit:	15 IN	12 IN	11 IN
Height Minimum, Maximum:		6 18	4 18
Density, Unit:	1000 YD2	110 YD2	150 YD2
Pest 2 Code, Type, Scale:	THLSS W	THLSS W	THLSS W
Stage Majority, Percent:		40 100	
Height, Unit:	14 IN	12 IN	
Height Minimum, Maximum:		6 18	
Density, Unit:	81 YD2	5.5 YD2	
Pest 3 Code, Type, Scale:	TAROF W	TAROF W	TAROF W
Stage Majority, Percent:		40 100	
Height, Unit:	5 IN	15 IN	1.5 IN
Height Minimum, Maximum:		6 24	1 3
Density, Unit:	5 YD2	10.5 YD2	1 YD2
Pest 4 Code, Type, Scale:	GALAP W	GALAP W	GALAP W
Height, Unit:	9 IN		
Density, Unit:	2 YD2		
Pest 5 Code, Type, Scale:	COIMA W	COIMA W	COIMA W
Stage Majority, Percent:		40 100	
Height, Unit:	11 IN	21 IN	30 IN
Height Minimum, Maximum:		6 36	12 48
Density, Unit:	1 YD2	3 YD2	3 YD2
Pest 6 Code, Type, Scale:	LACSE W	LACSE W	LACSE W
Height, Unit:	5 IN		7 IN
Height Minimum, Maximum:			4 10
Density, Unit:	35 YD2		30 YD2
Pest 7 Code, Type, Scale:	STEME W	STEME W	STEME W
Height, Unit:	4 IN		
Density, Unit:	25 YD2		
Pest 8 Code, Type, Scale:	CRUNU W	CRUNU W	CRUNU W
Stage Majority, Percent:		40 100	
Height, Unit:	15 IN	23 IN	23 IN
Height Minimum, Maximum:	10 20	10 36	8 78
Density, Unit:	2 YD2	3 YD2	8 YD2
Pest 9 Code, Type, Scale:	TRFPR W	TRFPR W	TRFPR W
Height, Unit:			11 IN
Height Minimum, Maximum:			6 18
Density, Unit:			8 YD2
Pest10 Code, Type, Scale:	TRODM W	TRODM W	TRODM W
Height, Unit:			18 IN
Height Minimum, Maximum:			10 26
Density, Unit:			2

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Application Equipment			
	A	B	C
Appl. Equipment:	CO2 Backpack	CO2 Backpack	CO2 BKPK
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	XR 110 02
Nozzle Spacing, Unit:	15 IN	15 IN	15 IN
Nozzles/Row:	6	6	6
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	MEIGS	MEIGS	MEIGS
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

Date	By	Notes
7-7-2010	MH	Bulk spray application of roundup

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 Location: Throckmorton Study Director: White/Marquardt
 Project ID: Investigator: Dr. Bill Johnson
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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	BROTE	CRUNU	LACSE	TAROF	LACSE	SETFA		
Pest Scientific Name	Bromus tectorum	Carduus nutans	Lactuca serriosa	Taraxacum officinale	Lactuca serriosa	Setaria faberii		
Pest Name	Downy brome	Musk thistle	Prickly lettuce	Common dandelion	Prickly lettuce	Giant foxtail		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Crop Variety								
Description								
Rating Date	5-28-2010	5-28-2010	5-28-2010	5-28-2010	6-18-2010	6-18-2010		
Rating Type	EFF	EFF	EFF	EFF	EFF	EFF		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V1-2-4"				V1-7"			
Pest Stage Majority	12-24"	2-60"	4-24"	2-24"	15"	8"		
Pest Density, Unit	87.5YD2	5.5 YD2	27.5YD2	27.5YD2	20 YD2	60 YD2		
Assessed By	CB/RT	CB/RT	CB/RT	CB/RT	MW	MW		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 Untreated Check			0.0 e	0.0 d	0.0 c	0.0 d	0.0 b	0.0 b
2 E-99 (6.1 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.51 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal A	A A A	100.0 a	99.5 a	96.5 a	90.3 a	93.3 a	17.5 b
3 E-99 (6.1 L) Roundup PowerMax 4.5 SL AMS - Liquid	1.01 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal A	A A A	100.0 a	97.5 a	98.8 a	92.0 a	94.3 a	15.0 b
4 AGH 09008 (3.5 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.437 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal A	A A A	100.0 a	99.5 a	99.5 a	83.0 ab	84.8 a	25.0 b
5 AGH 09008 (3.5 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.875 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal A	A A A	99.3 a	97.3 a	95.0 a	86.8 ab	84.5 a	7.5 b
6 E-99 (6.1 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.51 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal B	B B B	91.3 a	60.8 abc	74.3 a	52.5 bc	68.8 a	67.5 a
7 E-99 (6.1 L) Roundup PowerMax 4.5 SL AMS - Liquid	1.01 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal B	B B B	89.3 a	78.8 ab	91.3 a	56.3 bc	84.5 a	69.5 a
8 AGH 09008 (3.5 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.437 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal B	B B B	91.3 a	78.8 ab	88.0 a	56.3 bc	66.3 a	78.8 a
9 AGH 09008 (3.5 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.875 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal B	B B B	89.5 a	63.3 abc	85.8 a	51.8 bc	74.8 a	66.0 a

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	BROTE	CRUNU	LACSE	TAROF	LACSE	SETFA		
Pest Scientific Name	Bromus tectorum	Carduus nutans	Lactuca serrio>	Taraxacum offi>	Lactuca serrio>	Setaria faberi		
Pest Name	Downy brome	Musk thistle	Prickly lettuce	Common dandel>	Prickly lettuce	Giant foxtail		
Crop Code								
BBCH Scale								
Crop Scientific Name								
Crop Name								
Crop Variety								
Description								
Rating Date	5-28-2010	5-28-2010	5-28-2010	5-28-2010	6-18-2010	6-18-2010		
Rating Type	EFF	EFF	EFF	EFF	EFF	EFF		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V1-2-4"				V1-7"			
Pest Stage Majority	12-24"	2-60"	4-24"	2-24"	15"	8"		
Pest Density, Unit	87.5YD2	5.5 YD2	27.5YD2	27.5YD2	20 YD2	60 YD2		
Assessed By	CB/RT	CB/RT	CB/RT	CB/RT	MW	MW		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
10 E-99 (6.1 L)	0.51 lb ae/a	C	46.3 bc	47.5 bc	34.3 b	28.8 cd	91.0 a	91.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C						
AMS - Liquid	17 lb ai/100 gal	C						
11 E-99 (6.1 L)	1.01 lb ae/a	C	12.5 de	41.3 bc	18.8 bc	20.0 cd	95.8 a	91.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C						
AMS - Liquid	17 lb ai/100 gal	C						
12 AGH 09008 (3.5 L)	0.437 lb ae/a	C	31.3 cd	25.0 cd	18.8 bc	15.0 d	78.8 a	94.5 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C						
AMS - Liquid	17 lb ai/100 gal	C						
13 AGH 09008 (3.5 L)	0.875 lb ae/a	C	57.5 b	41.3 bc	43.8 b	23.8 cd	88.5 a	93.5 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C						
AMS - Liquid	17 lb ai/100 gal	C						
LSD (P=.05)			21.47	26.06	20.71	23.87	20.20	28.48
Standard Deviation			15.02	18.23	14.49	16.70	14.14	19.93
CV			21.51	28.55	22.31	33.09	18.28	36.12
Bartlett's X2			26.439	52.903	43.25	14.392	12.263	33.282
P(Bartlett's X2)			0.001*	0.001*	0.001*	0.212	0.344	0.001*
Replicate F			1.344	2.700	1.336	2.289	0.560	7.221
Replicate Prob(F)			0.2754	0.0601	0.2779	0.0949	0.6447	0.0006
Treatment F			23.099	12.151	25.174	13.945	12.568	13.352
Treatment Prob(F)			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; EFF; percent; V1-2-4"; 12-24"; per square yard; CB/RT
Column 2: Weed or volunteer crop; US; EFF; percent; 2-60"; per square yard; CB/RT
Column 3: Weed or volunteer crop; US; EFF; percent; 4-24"; per square yard; CB/RT
Column 4: Weed or volunteer crop; US; EFF; percent; 2-24"; per square yard; CB/RT
Column 5: Weed or volunteer crop; US; EFF; percent; V1-7"; 15"; per square yard; MW
Column 6: Weed or volunteer crop; US; EFF; percent; 8"; per square yard; MW
Column 7: Weed or volunteer crop; US; EFF; percent; 4"; per square yard; MW
Column 8: Weed or volunteer crop; US; EFF; percent; 8"; per square yard; MW
Column 9: Weed or volunteer crop; US; EFF; percent; 8"; per square yard; MW
Column 10: Weed or volunteer crop; US; EFF; percent; MW
Column 11: US; STAND; percent; MW
Column 12: US; phytotoxicity - chlorosis; percent; MW
Column 13: US; phytotoxicity - leaf malformation; percent; MW
Column 14: Weed or volunteer crop; US; EFF; percent; 30"; per square yard; MW
Column 15: Weed or volunteer crop; US; EFF; percent; 28"; per square yard; MW
Column 16: Weed or volunteer crop; US; EFF; percent; 12"; per square yard; MW
Column 17: Weed or volunteer crop; US; EFF; percent; 14"; per square yard; MW
Column 18: Weed or volunteer crop; US; EFF; percent; 10"; per square yard; MW
Column 19: Weed or volunteer crop; US; EFF; percent; 12"; per square yard; MW
Column 20: US; STUNT; percent; MW

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Pest Type	W Weed	W Weed	W Weed	W Weed					
Pest Code	AMBEL	TAROF	TRFPR	ABUTH					
Pest Scientific Name	Ambrosia artem>	Taraxacum offi>	Trifolium prat>	Abutilon theop>					
Pest Name	Common ragweed	Common dandel>	Red clover	Velvetleaf					
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									
Description									
Rating Date	6-18-2010	6-18-2010	6-18-2010	6-18-2010	6-18-2010	6-18-2010	6-18-2010		
Rating Type	EFF	EFF	EFF	EFF	STAND	PHYCHL	PHYLMA		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority									
Pest Stage Majority	4"	8"	8"						
Pest Density, Unit	5 YD2	2 YD2	6 YD2						
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	7	8	9	10	11	12	13
1 Untreated Check			0.0 b	0.0 d	0.0 b	0.0 b	0.0 b	0.0 a	0.0 a
2 E-99 (6.1 L)	0.51 lb ae/a	A	95.7 a	59.8 abc	99.0 a	98.3 a	96.8 a	1.3 a	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
3 E-99 (6.1 L)	1.01 lb ae/a	A	96.8 a	94.3 a	95.5 a	49.5 a	89.5 a	0.0 a	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
4 AGH 09008 (3.5 L)	0.437 lb ae/a	A	74.3 a	84.8 ab	99.0 a	99.0 a	93.3 a	0.0 a	2.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
5 AGH 09008 (3.5 L)	0.875 lb ae/a	A	99.0 a	73.8 abc	99.0 a	99.0 a	95.5 a	0.0 a	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
6 E-99 (6.1 L)	0.51 lb ae/a	B	86.8 a	43.8 bc	99.0 a	99.0 a	95.5 a	0.8 a	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							
7 E-99 (6.1 L)	1.01 lb ae/a	B	99.0 a	40.0 c	91.8 a	74.3 a	92.0 a	0.0 a	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							
8 AGH 09008 (3.5 L)	0.437 lb ae/a	B	99.0 a	77.0 abc	89.3 a	99.0 a	96.8 a	0.0 a	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							
9 AGH 09008 (3.5 L)	0.875 lb ae/a	B	99.0 a	57.3 abc	79.5 a	99.0 a	96.8 a	1.5 a	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							

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Pest Type	W Weed	W Weed	W Weed	W Weed					
Pest Code	AMBEL	TAROF	TRFPR	ABUTH					
Pest Scientific Name	Ambrosia artem>	Taraxacum offi>	Trifolium prat>	Abutilon theop>					
Pest Name	Common ragweed	Common dandel>	Red clover	Velvetleaf					
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									
Description									
Rating Date	6-18-2010	6-18-2010	6-18-2010	6-18-2010	6-18-2010	6-18-2010	6-18-2010		
Rating Type	EFF	EFF	EFF	EFF	STAND	PHYCHL	PHYLMA		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority									
Pest Stage Majority	4"	8"	8"						
Pest Density, Unit	5 YD2	2 YD2	6 YD2						
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	7	8	9	10	11	12	13
10 E-99 (6.1 L)	0.51 lb ae/a	C	99.0 a	92.0 a	91.8 a	99.0 a	72.5 a	0.8 a	2.5 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
11 E-99 (6.1 L)	1.01 lb ae/a	C	99.0 a	98.0 a	92.0 a	99.0 a	87.3 a	0.0 a	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
12 AGH 09008 (3.5 L)	0.437 lb ae/a	C	99.0 a	81.0 abc	80.8 a	99.0 a	87.3 a	2.5 a	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
13 AGH 09008 (3.5 L)	0.875 lb ae/a	C	99.0 a	82.3 abc	87.0 a	99.0 a	89.8 a	1.3 a	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
LSD (P=.05)	21.38		21.38	26.56	19.80	31.43	18.63	2.15	2.30
Standard Deviation	14.81		14.81	18.58	13.85	21.77	13.03	1.50	1.61
CV	16.8		16.8	27.34	16.32	25.42	15.51	243.98	214.48
Bartlett's X2	10.512		10.512	21.358	7.107	0.061	27.44	2.308	1.198
P(Bartlett's X2)	0.005*		0.005*	0.03*	0.418	0.805	0.004*	0.805	0.945
Replicate F	2.538		2.538	2.629	1.527	0.406	0.527	0.569	1.751
Replicate Prob(F)	0.0724		0.0724	0.0650	0.2241	0.7499	0.6663	0.6392	0.1739
Treatment F	13.746		13.746	8.794	14.470	7.414	16.038	1.157	1.320
Treatment Prob(F)	0.0001		0.0001	0.0001	0.0001	0.0001	0.0001	0.3486	0.2499

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Pest Type	W Weed LACSE	W Weed TRFPR	W Weed SETFA	W Weed AMBTR	W Weed ERICA	W Weed TAROF			
Pest Code	Lactuca serrio>	Trifolium prat>	Setaria faberi	Ambrosia trifi>	Conyza canad>	Taraxacum offi>			
Pest Scientific Name	Prickly lettuce	Red clover	Giant foxtail	Giant ragweed	Canada horsewe>	Common dandel>			
Pest Name							GLXMA		
Crop Code							BSOY		
BBCH Scale							Glycine max		
Crop Scientific Name							Soybean		
Crop Name									
Crop Variety									
Description									
Rating Date	6-28-2010	6-28-2010	6-28-2010	6-28-2010	6-28-2010	6-28-2010	6-28-2010		
Rating Type	EFF	EFF	EFF	EFF	EFF	EFF	STUNT		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority									
Pest Stage Majority	30"	28"	12"	14"	10"	12"			
Pest Density, Unit	12 YD2	3 YD2	100 YD2	5 YD2	5 YD2	2 YD2			
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	14	15	16	17	18	19	20
1 Untreated Check			0.0 b	0.0 b	0.0 c	0.0 c	0.0 b	0.0 d	0.0 a
2 E-99 (6.1 L)	0.51 lb ae/a	A	83.8 a	99.0 a	0.0 c	49.5 b	52.3 a	37.3 cd	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
3 E-99 (6.1 L)	1.01 lb ae/a	A	64.5 a	99.0 a	5.0 bc	99.0 a	69.5 a	44.8 bcd	2.5 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
4 AGH 09008 (3.5 L)	0.437 lb ae/a	A	62.5 a	84.3 a	12.5 bc	99.0 a	71.0 a	17.5 d	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
5 AGH 09008 (3.5 L)	0.875 lb ae/a	A	81.0 a	99.0 a	7.5 bc	99.0 a	76.0 a	37.5 cd	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	A							
AMS - Liquid	17 lb ai/100 gal	A							
6 E-99 (6.1 L)	0.51 lb ae/a	B	60.0 a	99.0 a	67.5 a	99.0 a	52.5 a	15.0 d	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							
7 E-99 (6.1 L)	1.01 lb ae/a	B	83.3 a	84.3 a	10.0 bc	99.0 a	67.3 a	22.5 d	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							
8 AGH 09008 (3.5 L)	0.437 lb ae/a	B	59.8 a	74.3 a	55.0 a	86.8 a	49.8 a	5.0 d	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							
9 AGH 09008 (3.5 L)	0.875 lb ae/a	B	85.8 a	64.5 a	42.5 ab	91.8 a	67.0 a	7.5 d	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	B							
AMS - Liquid	17 lb ai/100 gal	B							

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Pest Type	W Weed LACSE	W Weed TRFPR	W Weed SETFA	W Weed AMBTR	W Weed ERICA	W Weed TAROF			
Pest Code	Lactuca serrio>	Trifolium prat>	Setaria faberi	Ambrosia trifi>	Conyza canaden>	Taraxacum offi>			
Pest Scientific Name	Prickly lettuce	Red clover	Giant foxtail	Giant ragweed	Canada horsewe>	Common dandel>			
Pest Name							GLXMA		
Crop Code							BSOY		
BBCH Scale							Glycine max		
Crop Scientific Name							Soybean		
Crop Name									
Crop Variety									
Description									
Rating Date	6-28-2010	6-28-2010	6-28-2010	6-28-2010	6-28-2010	6-28-2010	6-28-2010		
Rating Type	EFF	EFF	EFF	EFF	EFF	EFF	STUNT		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority									
Pest Stage Majority	30"	28"	12"	14"	10"	12"			
Pest Density, Unit	12 YD2	3 YD2	100 YD2	5 YD2	5 YD2	2 YD2			
Assessed By	MW	MW	MW	MW	MW	MW	MW		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	14	15	16	17	18	19	20
10 E-99 (6.1 L)	0.51 lb ae/a	C	92.3 a	95.5 a	41.3 ab	89.3 a	82.0 a	87.0 abc	3.8 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
11 E-99 (6.1 L)	1.01 lb ae/a	C	88.5 a	91.8 a	68.8 a	99.0 a	99.0 a	99.0 a	3.8 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
12 AGH 09008 (3.5 L)	0.437 lb ae/a	C	70.0 a	91.8 a	63.8 a	99.0 a	92.0 a	91.8 ab	0.0 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
13 AGH 09008 (3.5 L)	0.875 lb ae/a	C	84.8 a	86.8 a	65.0 a	99.0 a	87.0 a	79.5 abc	1.3 a
Roundup PowerMax 4.5 SL	0.75 lb ae/a	C							
AMS - Liquid	17 lb ai/100 gal	C							
LSD (P=.05)	29.14	34.00	26.66	24.91	36.52	36.21	3.42		
Standard Deviation	20.39	23.79	18.65	17.43	25.56	25.34	2.39		
CV	28.93	28.93	55.27	20.43	38.4	60.52	226.04		
Bartlett's X2	22.648	13.132	10.983	6.646	10.978	15.895	3.727		
P(Bartlett's X2)	0.02*	0.069	0.359	0.084	0.359	0.103	0.589		
Replicate F	1.076	1.160	4.098	2.671	3.851	1.614	0.757		
Replicate Prob(F)	0.3714	0.3385	0.0134	0.0620	0.0173	0.2031	0.5256		
Treatment F	5.596	5.095	9.228	11.100	3.874	7.912	1.430		
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0008	0.0001	0.1977		

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Pest Type Pest Code Pest Scientific Name Pest Name Crop Code BBCH Scale Crop Scientific Name Crop Name Crop Variety Description Rating Date Rating Type Rating Unit Number of Subsamples Crop Stage Majority Pest Stage Majority Pest Density, Unit Assessed By	1																																																																																																																																		
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Trt No.	Treatment Name	Rate Rate Unit	Appl Code	21
10	E-99 (6.1 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.51 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal	C C C	
11	E-99 (6.1 L) Roundup PowerMax 4.5 SL AMS - Liquid	1.01 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal	C C C	
12	AGH 09008 (3.5 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.437 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal	C C C	
13	AGH 09008 (3.5 L) Roundup PowerMax 4.5 SL AMS - Liquid	0.875 lb ae/a 0.75 lb ae/a 17 lb ai/100 gal	C C C	
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