

## Purdue University

Kixor efficacy on chickweed and henbit

Trial ID: 09S-SEP-NTS-50      Protocol ID: 09S-SEP-NTS-50  
 Location: SEPAC      Study Director: Melissa Kruger/Paul Marquardt  
 Project ID:      Investigator: Dr. Bill Johnson  
                          Sponsor Contact: Gery Welker

**General Trial Information**

**Study Director:** Melissa Kruger/Paul Marquardt      **Title:** Lab Tech VIII/Research Assoc.  
**Investigator:** Dr. William G. Johnson      **Title:** Associate Professor

**Discipline:** H herbicide  
**Trial Status:** F one-year/final  
**Initiation Date:** 4/8/09      **Planned Completion Date:** 7/28/09

**Trial Location**

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

**Objectives:**

The objective of the trial is to evaluate the efficacy of Kixor as an early season burndown on chickweed and henbit.

**Personnel**

**Study Director:** Melissa Kruger/Paul Marquardt      **Title:** Lab Tech VIII/Research Assoc.  
**Affiliation:** Purdue University  
**Address:** 915 W. State St.  
**Location:** West Lafayette, IN USA  
**Postal Code:** 47907      **E-mail:** mmkruger@purdue.edu/pmarquar@purdue.edu  
**Phone No.:** 765-494-4621  
**Investigator:** Dr. William G. Johnson      **Title:** Associate 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  
**City:** Butleville      **Phone No.:** 1-812-458-6977  
**State/Prov:** IN      **Fax No.:** 1-812-458-6979  
**Postal Code:** 477223-021      **E-mail:** biehled@purdue.edu  
**Country:** USA      United States

**Crop Description**

**Crop 1:** GLXMA Glycine max Soybean  
**Variety:** AG3402      **Description:** Roundup Ready  
**BBCH Scale:** BSOY      **Planting Date:** 5/26/09  
**Planting Method:** DIRDRI direct drilled      **Rate, Unit:** 150000 S/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 30 IN  
**Soil Temperature, Unit:** 78 F  
**Soil Moisture:** SLIWET slightly wet      **Emergence Date:** 5/31/09

**Pest Description**

**Pest 1 Type:** W      **Code:** CAPBP Capsella bursa-pastoris  
**Common Name:** Shepherd's purse

**Pest 2 Type:** W      **Code:** RANAB Ranunculus abortivus  
**Common Name:** Smallflower buttercup

**Pest 3 Type:** W      **Code:** SENGL Senecio glabellus  
**Common Name:** Cressleaf groundsel

**Pest 4 Type:** W **Code:** LAMPU *Lamium purpureum*  
**Common Name:** Purple deadnettel

**Pest 5 Type:** W **Code:** CERVU *Cerastium fontanum vulgare*  
**Common Name:** Mouse-ear chickweed

**Pest 6 Type:** W **Code:** TAROF *Taraxacum officinale*  
**Common Name:** Common dandelion

**Pest 7 Type:** W **Code:** POAAN *Poa annua*  
**Common Name:** Annual bluegrass

**Pest 8 Type:** W **Code:** ERICA *Conyza canadensis*  
**Common Name:** Horseweed

**Pest 9 Type:** W **Code:** ALLVI *Allium vineale*  
**Common Name:** Wild garlic

**Pest10 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*  
**Common Name:** Common ragweed

**Pest11 Type:** W **Code:** STEME *Stellaria media*  
**Common Name:** Common chickweed

**Pest12 Type:** W **Code:** BROTE *Bromus tectorum*  
**Common Name:** Downy brome

**Pest13 Type:** W **Code:** DIGIS *Digitaria ischaemum*  
**Common Name:** Smooth crabgrass

**Pest14 Type:** W **Code:** PANDI *Panicum dichotomiflorum*  
**Common Name:** Fall panicum

**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:** NOTILL no-till  
**Replications:** 4 **Study Design:** RACOB L Randomized Complete Block (RCB)  
**Untreated Arrangement:** INCLUDED single control randomized in each block

**Soil Description**

**Description Name:** SEPAC Field U41-6  
**% OM:** 1.3 **Texture:** SIL silt loam  
**pH:** 6.5 **Soil Name:** Avonburg  
**CEC:** 5.7

**Analyzed By:**  
 A&L Great Lakes Laboratories, Inc. Report#: F07320-0472

**Additional Measured Elements**

Element	Quantity	Unit
P	13	ppm
K	68	ppm
Mg	155	ppm
Ca	600	ppm

**Moisture and Weather Conditions**

**Closest Weather Station:** On research farm **Distance, Unit:** 0.5 MI

**Application Description**

	A	B	C	D
<b>Application Date:</b>	4/8/09	4/23/09	5/26/09	7/6/09
<b>Time of Day:</b>	9:20 AM	8:45 AM	3:10 PM	1:00 PM
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	PREPLA	PREPLA	ATPLAN	POSPOS
<b>Application Placement:</b>	BROFOL	BROFOL	BROFOL	BROFOL
<b>Applied By:</b>	GK MK	VM	GK	RH JM
<b>Air Temperature, Unit:</b>	38 F	57 F	83 F	85 F
<b>% Relative Humidity:</b>	58	37	56	50
<b>Wind Velocity, Unit:</b>	4 MPH	6 MPH	4 MPH	2 MPH
<b>Wind Direction:</b>	SW	ESE	SSW	W
<b>Dew Presence (Y/N):</b>	Y yes	N no	N no	N no
<b>Soil Temperature, Unit:</b>	4 C	50 F	78 F	82 F
<b>Soil Moisture:</b>	MOIST	MOIST	DRY	WET
<b>% Cloud Cover:</b>	5	0	50	10

**Crop Stage At Each Application**

	A	B	C	D
<b>Crop 1 Code, BBCH Scale:</b>	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
<b>Stage Scale Used:</b>	BBCH	BBCH	BBCH	BBCH
<b>Stage Majority, Percent:</b>	N/A	N/A	N/A	V3
<b>Stage Minimum, Percent:</b>				V3
<b>Stage Maximum, Percent:</b>				V4
<b>Height, Unit:</b>				12 IN
<b>Height Minimum, Maximum:</b>				12 16

**Pest Stage At Each Application**

	A	B	C	D
<b>Pest 1 Code, Type, Scale:</b>	CAPBP W	CAPBP W	CAPBP W	CAPBP W
<b>Stage Majority, Percent:</b>	FLOWER	FLOWER		
<b>Stage Minimum, Percent:</b>	COTY	ROSETT		
<b>Stage Maximum, Percent:</b>	FLOWER	FLOWER		
<b>Height, Unit:</b>	5 IN	11.5 IN		
<b>Height Minimum, Maximum:</b>	2 8	5 18		
<b>Density, Unit:</b>	1 YD2	2.5 YD2		
<b>Pest 2 Code, Type, Scale:</b>	RANAB W	RANAB W	RANAB W	RANAB W
<b>Stage Majority, Percent:</b>	ROSETT	FLOWER		
<b>Stage Minimum, Percent:</b>	COTY	COTY		
<b>Stage Maximum, Percent:</b>	FLOWER	FLOWER		
<b>Height, Unit:</b>	3 IN	8 IN		
<b>Height Minimum, Maximum:</b>	0 6	0 16		
<b>Density, Unit:</b>	20 YD2	15 YD2		
<b>Pest 3 Code, Type, Scale:</b>	SENGL W	SENGL W	SENGL W	SENGL W
<b>Stage Majority, Percent:</b>	ROSETT	VEG	FLOWER	
<b>Stage Minimum, Percent:</b>		ROSETT	FLOWER	
<b>Stage Maximum, Percent:</b>		FLOWER	SEED	
<b>Height, Unit:</b>	3 IN	10 IN	23 IN	
<b>Height Minimum, Maximum:</b>	0 3	8 18	6 40	
<b>Density, Unit:</b>	2 YD2	10 YD2	5 YD2	
<b>Pest 4 Code, Type, Scale:</b>	LAMPU W	LAMPU W	LAMPU W	LAMPU W

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Stage Majority, Percent:	FLOWER	FLOWER		
Height, Unit:	4 IN	5 IN		
Height Minimum, Maximum:	2 6	0 10		
Density, Unit:	3 YD2	10 YD2		
Pest 5 Code, Type, Scale:	CERVU W	CERVU W	CERVU W	CERVU W
Stage Majority, Percent:	COTY	FLOWER	FLOWER	
Stage Minimum, Percent:		ROSETT	FLOWER	
Stage Maximum, Percent:		FLOWER	SEED	
Height, Unit:	1 IN	6 IN	10 IN	
Height Minimum, Maximum:	0 2	2 10	6 14	
Density, Unit:	15 YD2	3.5 YD2	2.5 YD2	
Pest 6 Code, Type, Scale:	TAROF W	TAROF W	TAROF W	TAROF W
Stage Majority, Percent:	ROSETT	ROSETT	ROSETT	SEED
Stage Minimum, Percent:		ROSETT	COTY	
Stage Maximum, Percent:		FLOWER	SEED	
Height, Unit:	6 IN	10 IN	12 IN	16 IN
Height Minimum, Maximum:	4 8	6 18	0 24	6 18
Density, Unit:	2 YD2	7.5 YD2	6 YD2	5 YD2
Pest 7 Code, Type, Scale:	POAAN W	POAAN W	POAAN W	POAAN W
Stage Majority, Percent:	VEG		VEG	
Stage Minimum, Percent:			VEG	
Stage Maximum, Percent:			SEED	
Height, Unit:	2 IN		2 IN	
Height Minimum, Maximum:	1 3		0 4	
Density, Unit:	27 YD2		27.5 YD2	
Pest 8 Code, Type, Scale:	ERICA W	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:			COTY	BOLT
Stage Minimum, Percent:			COTY	
Stage Maximum, Percent:			BOLT	
Height, Unit:			9 IN	10 IN
Height Minimum, Maximum:			0 18	0 20
Density, Unit:			5 YD2	5 YD2
Pest 9 Code, Type, Scale:	ALLVI W	ALLVI W	ALLVI W	ALLVI W
Stage Majority, Percent:		VEG		
Height, Unit:		16 IN		
Height Minimum, Maximum:		5 24		
Density, Unit:		35 YD2		
Pest10 Code, Type, Scale:	AMBEL W	AMBEL W	AMBEL W	AMBEL W
Stage Majority, Percent:			COTY	3 NODE
Stage Minimum, Percent:				COTY
Stage Maximum, Percent:				6 NODE
Height, Unit:			1 IN	20 IN
Height Minimum, Maximum:			0 2	2 28
Density, Unit:			6 YD2	5 YD2
Pest11 Code, Type, Scale:	STEME W	STEME W	STEME W	STEME W
Stage Majority, Percent:		ROSETT	FLOWER	
Stage Minimum, Percent:		ROSETT	FLOWER	
Stage Maximum, Percent:		FLOWER	SEED	
Height, Unit:		8 IN	9 IN	

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Height Minimum, Maximum:		2 12	6 12	
Density, Unit:		3 YD2	2 YD2	
Pest12 Code, Type, Scale:	BROTE W	BROTE W	BROTE W	BROTE W
Stage Majority, Percent:			FLOWER	
Stage Minimum, Percent:			FLOWER	
Stage Maximum, Percent:			SEED	
Height, Unit:			23 IN	
Height Minimum, Maximum:			10 36	
Density, Unit:			35 YD2	
Pest13 Code, Type, Scale:	DIGIS W	DIGIS W	DIGIS W	DIGIS W
Stage Majority, Percent:			2 LF	TILLER
Stage Minimum, Percent:			1 LF	
Stage Maximum, Percent:			3 LF	
Height, Unit:			2 IN	10 IN
Height Minimum, Maximum:			0 4	2 12
Density, Unit:			150 FT2	27 FT2
Pest14 Code, Type, Scale:	PANDI W	PANDI W	PANDI W	PANDI W

## Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 Backpack	CO2 Backpack	CO2 Backpack	CO2 Backpack
Equipment Type:	SPRBAC	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	17 PSI	17 PSI	17 PSI	17 PSI
Nozzle Type:	Flat Fan	Flat Fan	Flat Fan	Flat Fan
Nozzle Size:	XR11002	XR11002	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN	15 IN	15 IN
Nozzles/Row:	6	6	6	6
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Boom Height, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	H2O	H2O	H2O	H2O
Water Hardness (ppm CaCO3):	150	150	150	150
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	1.8 Liters	1.8 Liters	1.8 Liters	1.8 Liters
Propellant:	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	N no	N no	N no	N no

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 Project ID:                          Investigator: Dr. Bill Johnson  
    Sponsor Contact: Gery Welker

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	STEME	STEME	STEME	CERVU	CERVU
Pest Scientific Name	Stellaria media	Stellaria media	Stellaria media	Cerastium font>	Cerastium font>
Pest Name	Common chickwe>	Common chickwe>	Common chickwe>	Mouse-ear chic>	Mouse-ear chic>
Crop Code	N/A	N/A	GLXMA	N/A	N/A
Crop Scientific Name			Glycine max		
Crop Name			Soybean		
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	4/23/09	5/26/09	6/9/09	4/23/09	5/15/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	N/A	N/A	V1	N/A	N/A
Crop Stage Minimum/Maximum			2-4"		
Pest Stage Majority	COTY-VEG	FLO-SEED	SEED-SEN	COTY-VEG	FLOWER
Pest Stage Minimum/Maximum	2-12"	6-12"	6-12"	2-10"	4-10"
Pest Density, Unit	3 YD2	2 YD2	2 YD2	3 YD2	1 M2
Footnote Number					
Assessed By	MK	MK	MK	MK	WGJ
Rating Timing					
Days After First/Last Applic.	15 15	48 33	62 14	15 15	37 22
Trt-Eval Interval					37 DA-A
Plant-Eval Interval	-33 DP-1	0 DP-1	14 DP-1	-33 DP-1	-11 DP-1
Days After Emergence	-38 DE	-5 DE-	9 DE-1	-38 DE	-16 DE
Number of Decimals					
Trt No.	Treatment Name	Rate	Unit	Appl Code	
1	Untreated	0.0	b		1
2	Sharpen	0.0223	lb ai/a	A	18
	Roundup PowerMAX	0.75	lb ae/a	A	
	COC	1	% v/v	A	
	Ammonium Sulfate	17	lb/100 gal	A	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
3	OpTill	1.36	oz ai/a	A	26
	Roundup PowerMAX	0.75	lb ae/a	A	
	COC	1	% v/v	A	
	Ammonium Sulfate	17	lb/100 gal	A	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
4	Roundup PowerMAX	0.75	lb ae/a	A	2
	2,4-D Ester	0.5	lb ae/a	A	
	NIS	0.25	% v/v	A	
	Ammonium Sulfate	17	lb/100 gal	A	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	STEME	STEME	STEME	CERVU	CERVU
Pest Scientific Name	Stellaria media	Stellaria media	Stellaria media	Cerastium font>	Cerastium font>
Pest Name	Common chickwe>	Common chickwe>	Common chickwe>	Mouse-ear chic>	Mouse-ear chic>
Crop Code	N/A	N/A	GLXMA	N/A	N/A
Crop Scientific Name			Glycine max		
Crop Name			Soybean		
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	4/23/09	5/26/09	6/9/09	4/23/09	5/15/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	N/A	N/A	V1	N/A	N/A
Crop Stage Minimum/Maximum			2-4"		
Pest Stage Majority	COTY-VEG	FLO-SEED	SEED-SEN	COTY-VEG	FLOWER
Pest Stage Minimum/Maximum	2-12"	6-12"	6-12"	2-10"	4-10"
Pest Density, Unit	3 YD2	2 YD2	2 YD2	3 YD2	1 M2
Footnote Number					
Assessed By	MK	MK	MK	MK	WGJ
Rating Timing					
Days After First/Last Applic.	15 15	48 33	62 14	15 15	37 22
Trt-Eval Interval					37 DA-A
Plant-Eval Interval	-33 DP-1	0 DP-1	14 DP-1	-33 DP-1	-11 DP-1
Days After Emergence	-38 DE	-5 DE-	9 DE-1	-38 DE	-16 DE
Number of Decimals					
Trt No.	Treatment Name	Rate	Unit	Appl Code	
					1
					18
					26
					2
					11
5	Sharpen	0.0223	lb ai/a	B	
	Roundup PowerMAX	0.75	lb ae/a	B	100.0 a
	COC	1	% v/v	B	
	Ammonium Sulfate	17	lb/100 gal	B	100.0 a
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	98.3 a
6	OpTill	1.36	oz ai/a	B	
	Roundup PowerMAX	0.75	lb ae/a	B	100.0 a
	COC	1	% v/v	B	
	Ammonium Sulfate	17	lb/100 gal	B	100.0 a
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	99.5 a
7	Roundup PowerMAX	0.75	lb ae/a	B	
	2,4-D Ester	0.5	lb ae/a	B	100.0 a
	NIS	0.25	% v/v	B	
	Ammonium Sulfate	17	lb/100 gal	B	100.0 a
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	96.3 a
8	Roundup PowerMAX	0.75	lb ae/a	C	
	NIS	0.25	% v/v	C	100.0 a
	Ammonium Sulfate	17	lb/100 gal	C	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	STEME	STEME	STEME	CERVU	CERVU
Pest Scientific Name	Stellaria media	Stellaria media	Stellaria media	Cerastium font>	Cerastium font>
Pest Name	Common chickwe>	Common chickwe>	Common chickwe>	Mouse-ear chic>	Mouse-ear chic>
Crop Code	N/A	N/A	GLXMA	N/A	N/A
Crop Scientific Name			Glycine max		
Crop Name			Soybean		
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	4/23/09	5/26/09	6/9/09	4/23/09	5/15/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	N/A	N/A	V1	N/A	N/A
Crop Stage Minimum/Maximum			2-4"		
Pest Stage Majority	COTY-VEG	FLO-SEED	SEED-SEN	COTY-VEG	FLOWER
Pest Stage Minimum/Maximum	2-12"	6-12"	6-12"	2-10"	4-10"
Pest Density, Unit	3 YD2	2 YD2	2 YD2	3 YD2	1 M2
Footnote Number					
Assessed By	MK	MK	MK	MK	WGJ
Rating Timing					
Days After First/Last Applic.	15 15	48 33	62 14	15 15	37 22
Trt-Eval Interval					37 DA-A
Plant-Eval Interval	-33 DP-1	0 DP-1	14 DP-1	-33 DP-1	-11 DP-1
Days After Emergence	-38 DE	-5 DE-	9 DE-1	-38 DE	-16 DE
Number of Decimals					
Trt No.	Treatment Name	Rate	Unit	Appl Code	
					1 18 26 2 11
9	Roundup PowerMAX	0.75	lb ae/a	C	
	2,4-D Ester	0.5	lb ae/a	C	
	NIS	0.25	% v/v	C	
	Ammonium Sulfate	17	lb/100 gal	C	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
10	Sharpen	0.0223	lb ai/a	C	
	Roundup PowerMAX	0.75	lb ae/a	C	
	COC	1	% v/v	C	
	Ammonium Sulfate	17	lb/100 gal	C	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
11	OpTill	1.36	oz ai/a	C	
	Roundup PowerMAX	0.75	lb ae/a	C	
	COC	1	% v/v	C	
	Ammonium Sulfate	17	lb/100 gal	C	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
12	Untreated	0.0	b		
LSD (P=.05)	3.47	0.00	0.00	7.43	3.44
Standard Deviation	2.25	0.00	0.00	4.82	2.23
CV	3.82	0.0	0.0	8.76	3.79
Bartlett's X2	3.317	0.0	0.0	5.805	5.872
P(Bartlett's X2)	0.19	.	.	0.055	0.053
Replicate F	1.700	0.000	0.000	2.105	1.930
Replicate Prob(F)	0.2199	1.0000	1.0000	0.1531	0.1787
Treatment F	2286.984	0.000	0.000	434.465	2317.623
Treatment Prob(F)	0.0001	1.0000	1.0000	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	CERVU	CERVU	LAMPU	LAMPU	SENGL	SENGL				
Pest Scientific Name	Cerastium font>	Cerastium font>	Lamium purpure>	Lamium purpure>	Senecio glabel>	Senecio glabel>				
Pest Name	Mouse-ear chic>	Mouse-ear chic>	Purple deadnet>	Purple deadnet>	Cressleaf grou>	Cressleaf grou>				
Crop Code	N/A	GLXMA	N/A	N/A	N/A	N/A				
Crop Scientific Name		Glycine max								
Crop Name		Soybean								
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P				
Rating Date	5/26/09	6/9/09	4/23/09	5/15/09	4/23/09	5/15/09				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Sample Size, Unit										
Number of Subsamples	1	1	1	1	1	1				
Crop Stage Majority	N/A	V1	N/A	N/A	N/A	N/A				
Crop Stage Minimum/Maximum		2-4"								
Pest Stage Majority	FLO-SEED	SEED-SEN	COTY-VEG	FLOWER	VEG	FLOWER				
Pest Stage Minimum/Maximum	6-14"	6-14"	0-10"	4-8"	8-18"	1-2'				
Pest Density, Unit	2 YD2	2 YD2	10 YD2	3 M2	10 YD2	1 M2				
Footnote Number										
Assessed By	MK	MK	MK	WGJ	MK	WGJ				
Rating Timing										
Days After First/Last Applic.	48 33	62 14	15 15	37 22	15 15	37 22				
Trt-Eval Interval				37 DA-A		37 DA-A				
Plant-Eval Interval	0 DP-1	14 DP-1	-33 DP-1	-11 DP-1	-33 DP-1	-11 DP-1				
Days After Emergence	-5 DE-	9 DE-1	-38 DE	-16 DE	-38 DE	-16 DE				
Number of Decimals										
Trt No.	Treatment	Rate	Unit	Appl Code	20	27	3	14	4	10
1	Untreated	0.0	b		0.0	b		0.0	b	0.0
2	Sharpen	0.0223	lb ai/a	A	100.0	a		93.0	a	
	Roundup PowerMAX	0.75	lb ae/a	A						
	COC	1	% v/v	A						
	Ammonium Sulfate	17	lb/100 gal	A						
	Roundup PowerMAX	0.75	lb ae/a	D						
	NIS	0.25	% v/v	D						
	Ammonium Sulfate	17	lb/100 gal	D						
3	OpTill	1.36	oz ai/a	A	100.0	a		95.0	a	
	Roundup PowerMAX	0.75	lb ae/a	A						
	COC	1	% v/v	A						
	Ammonium Sulfate	17	lb/100 gal	A						
	Roundup PowerMAX	0.75	lb ae/a	D						
	NIS	0.25	% v/v	D						
	Ammonium Sulfate	17	lb/100 gal	D						
4	Roundup PowerMAX	0.75	lb ae/a	A	98.5	a		83.0	a	
	2,4-D Ester	0.5	lb ae/a	A						
	NIS	0.25	% v/v	A						
	Ammonium Sulfate	17	lb/100 gal	A						
	Roundup PowerMAX	0.75	lb ae/a	D						
	NIS	0.25	% v/v	D						
	Ammonium Sulfate	17	lb/100 gal	D						

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Pest Type	W Weed					
Pest Code	CERVU	CERVU	LAMPU	LAMPU	SENGL	SENGL
Pest Scientific Name	Cerastium font>	Cerastium font>	Lamium purpure>	Lamium purpure>	Senecio label>	Senecio label>
Pest Name	Mouse-ear chic>	Mouse-ear chic>	Purple deadnet>	Purple deadnet>	Cressleaf grou>	Cressleaf grou>
Crop Code	N/A	GLXMA	N/A	N/A	N/A	N/A
Crop Scientific Name		Glycine max				
Crop Name		Soybean				
Part Rated	PLOT P					
Rating Date	5/26/09	6/9/09	4/23/09	5/15/09	4/23/09	5/15/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Sample Size, Unit						
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	N/A	V1	N/A	N/A	N/A	N/A
Crop Stage Minimum/Maximum		2-4"				
Pest Stage Majority	FLO-SEED	SEED-SEN	COTY-VEG	FLOWER	VEG	FLOWER
Pest Stage Minimum/Maximum	6-14"	6-14"	0-10"	4-8"	8-18"	1-2'
Pest Density, Unit	2 YD2	2 YD2	10 YD2	3 M2	10 YD2	1 M2
Footnote Number						
Assessed By	MK	MK	MK	WGJ	MK	WGJ
Rating Timing						
Days After First/Last Applic.	48 33	62 14	15 15	37 22	15 15	37 22
Trt-Eval Interval				37 DA-A		37 DA-A
Plant-Eval Interval	0 DP-1	14 DP-1	-33 DP-1	-11 DP-1	-33 DP-1	-11 DP-1
Days After Emergence	-5 DE-	9 DE-1	-38 DE	-16 DE	-38 DE	-16 DE
Number of Decimals						
Trt No.	20	27	3	14	4	10
Treatment Name						
Rate						
Rate Unit						
Appl Code						
5 Sharpen	0.0223 lb ai/a	99.8 a		99.5 a		100.0 a
Roundup PowerMAX	0.75 lb ae/a					
COC	1 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
6 OpTill	1.36 oz ai/a	100.0 a		100.0 a		100.0 a
Roundup PowerMAX	0.75 lb ae/a					
COC	1 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
7 Roundup PowerMAX	0.75 lb ae/a	99.8 a		97.5 a		87.5 a
2,4-D Ester	0.5 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
8 Roundup PowerMAX	0.75 lb ae/a		100.0 a			
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					



Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SENGL	RANAB	TAROF	TAROF	TAROF
Pest Scientific Name	Senecio glabel>	Ranunculus abo>	Taraxacum offi>	Taraxacum offi>	Taraxacum offi>
Pest Name	Cressleaf grou>	Smallflower bu>	Common dandeli>	Common dandeli>	Common dandeli>
Crop Code	N/A	N/A	N/A	N/A	N/A
Crop Scientific Name					
Crop Name					
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	5/26/09	4/23/09	4/23/09	5/15/09	5/26/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	N/A	N/A	N/A	N/A	N/A
Crop Stage Minimum/Maximum					
Pest Stage Majority	FLOWER	COTY-VEG	ROSETT	FLOWER	FLO-SEED
Pest Stage Minimum/Maximum	6-40"	0-16"	6-18"	2-16"	0-24"
Pest Density, Unit	5 YD2	15 YD2	7 YD2	3 M2	6 YD2
Footnote Number					
Assessed By	MK	MK	MK	WGJ	MK
Rating Timing					
Days After First/Last Applic.	48 33	15 15	15 15	37 22	48 33
Trt-Eval Interval				37 DA-A	
Plant-Eval Interval	0 DP-1	-33 DP-1	-33 DP-1	-11 DP-1	0 DP-1
Days After Emergence	-5 DE-	-38 DE	-38 DE	-16 DE	-5 DE-
Number of Decimals					
Trt No.	17	5	6	8	16
Treatment Name					
Rate					
Unit					
Appl Code					
1 Untreated	0.0 b	0.0 b	0.0 c	0.0 b	0.0 b
2 Sharpen	0.0223 lb ai/a A	100.0 a	99.8 a	95.3 a	97.5 a
Roundup PowerMAX	0.75 lb ae/a A				
COC	1 % v/v A				
Ammonium Sulfate	17 lb/100 gal A				
Roundup PowerMAX	0.75 lb ae/a D				
NIS	0.25 % v/v D				
Ammonium Sulfate	17 lb/100 gal D				
3 OpTill	1.36 oz ai/a A	100.0 a	100.0 a	94.8 a	97.5 a
Roundup PowerMAX	0.75 lb ae/a A				
COC	1 % v/v A				
Ammonium Sulfate	17 lb/100 gal A				
Roundup PowerMAX	0.75 lb ae/a D				
NIS	0.25 % v/v D				
Ammonium Sulfate	17 lb/100 gal D				
4 Roundup PowerMAX	0.75 lb ae/a A	100.0 a	99.8 a	86.3 b	96.5 a
2,4-D Ester	0.5 lb ae/a A				
NIS	0.25 % v/v A				
Ammonium Sulfate	17 lb/100 gal A				
Roundup PowerMAX	0.75 lb ae/a D				
NIS	0.25 % v/v D				
Ammonium Sulfate	17 lb/100 gal D				

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	SENGL	RANAB	TAROF	TAROF	TAROF				
Pest Scientific Name	Senecio glabel>	Ranunculus abo>	Taraxacum offi>	Taraxacum offi>	Taraxacum offi>				
Pest Name	Cressleaf grou>	Smallflower bu>	Common dandeli>	Common dandeli>	Common dandeli>				
Crop Code	N/A	N/A	N/A	N/A	N/A				
Crop Scientific Name									
Crop Name									
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P				
Rating Date	5/26/09	4/23/09	4/23/09	5/15/09	5/26/09				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Sample Size, Unit									
Number of Subsamples	1	1	1	1	1				
Crop Stage Majority	N/A	N/A	N/A	N/A	N/A				
Crop Stage Minimum/Maximum									
Pest Stage Majority	FLOWER	COTY-VEG	ROSETT	FLOWER	FLO-SEED				
Pest Stage Minimum/Maximum	6-40"	0-16"	6-18"	2-16"	0-24"				
Pest Density, Unit	5 YD2	15 YD2	7 YD2	3 M2	6 YD2				
Footnote Number									
Assessed By	MK	MK	MK	WGJ	MK				
Rating Timing									
Days After First/Last Applic.	48 33	15 15	15 15	37 22	48 33				
Trt-Eval Interval				37 DA-A					
Plant-Eval Interval	0 DP-1	-33 DP-1	-33 DP-1	-11 DP-1	0 DP-1				
Days After Emergence	-5 DE-	-38 DE	-38 DE	-16 DE	-5 DE-				
Number of Decimals									
Trt No.	Treatment Name	Rate	Unit	Appl Code					
					17	5	6	8	16
5	Sharpen	0.0223	lb ai/a	B	100.0 a			95.8 a	98.0 a
	Roundup PowerMAX	0.75	lb ae/a	B					
	COC	1	% v/v	B					
	Ammonium Sulfate	17	lb/100 gal	B					
	Roundup PowerMAX	0.75	lb ae/a	D					
	NIS	0.25	% v/v	D					
	Ammonium Sulfate	17	lb/100 gal	D					
6	OpTill	1.36	oz ai/a	B	99.3 a			96.3 a	93.5 a
	Roundup PowerMAX	0.75	lb ae/a	B					
	COC	1	% v/v	B					
	Ammonium Sulfate	17	lb/100 gal	B					
	Roundup PowerMAX	0.75	lb ae/a	D					
	NIS	0.25	% v/v	D					
	Ammonium Sulfate	17	lb/100 gal	D					
7	Roundup PowerMAX	0.75	lb ae/a	B	100.0 a			90.8 a	90.0 a
	2,4-D Ester	0.5	lb ae/a	B					
	NIS	0.25	% v/v	B					
	Ammonium Sulfate	17	lb/100 gal	B					
	Roundup PowerMAX	0.75	lb ae/a	D					
	NIS	0.25	% v/v	D					
	Ammonium Sulfate	17	lb/100 gal	D					
8	Roundup PowerMAX	0.75	lb ae/a	C					
	NIS	0.25	% v/v	C					
	Ammonium Sulfate	17	lb/100 gal	C					
	Roundup PowerMAX	0.75	lb ae/a	D					
	NIS	0.25	% v/v	D					
	Ammonium Sulfate	17	lb/100 gal	D					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed						
Pest Code	SENGL	RANAB	TAROF	TAROF	TAROF						
Pest Scientific Name	Senecio glabel>	Ranunculus abo>	Taraxacum offi>	Taraxacum offi>	Taraxacum offi>						
Pest Name	Cressleaf grou>	Smallflower bu>	Common dandeli>	Common dandeli>	Common dandeli>						
Crop Code	N/A	N/A	N/A	N/A	N/A						
Crop Scientific Name											
Crop Name											
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P						
Rating Date	5/26/09	4/23/09	4/23/09	5/15/09	5/26/09						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	%	%	%	%	%						
Sample Size, Unit											
Number of Subsamples	1	1	1	1	1						
Crop Stage Majority	N/A	N/A	N/A	N/A	N/A						
Crop Stage Minimum/Maximum											
Pest Stage Majority	FLOWER	COTY-VEG	ROSETT	FLOWER	FLO-SEED						
Pest Stage Minimum/Maximum	6-40"	0-16"	6-18"	2-16"	0-24"						
Pest Density, Unit	5 YD2	15 YD2	7 YD2	3 M2	6 YD2						
Footnote Number											
Assessed By	MK	MK	MK	WGJ	MK						
Rating Timing											
Days After First/Last Applic.	48 33	15 15	15 15	37 22	48 33						
Trt-Eval Interval				37 DA-A							
Plant-Eval Interval	0 DP-1	-33 DP-1	-33 DP-1	-11 DP-1	0 DP-1						
Days After Emergence	-5 DE-	-38 DE	-38 DE	-16 DE	-5 DE-						
Number of Decimals											
Trt No.	17			5		6		8		16	
Treatment Name	Rate Unit Appl Code										
9	Roundup PowerMAX	0.75 lb ae/a	C								
	2,4-D Ester	0.5 lb ae/a	C								
	NIS	0.25 % v/v	C								
	Ammonium Sulfate	17 lb/100 gal	C								
	Roundup PowerMAX	0.75 lb ae/a	D								
	NIS	0.25 % v/v	D								
	Ammonium Sulfate	17 lb/100 gal	D								
10	Sharpen	0.0223 lb ai/a	C								
	Roundup PowerMAX	0.75 lb ae/a	C								
	COC	1 % v/v	C								
	Ammonium Sulfate	17 lb/100 gal	C								
	Roundup PowerMAX	0.75 lb ae/a	D								
	NIS	0.25 % v/v	D								
	Ammonium Sulfate	17 lb/100 gal	D								
11	OpTill	1.36 oz ai/a	C								
	Roundup PowerMAX	0.75 lb ae/a	C								
	COC	1 % v/v	C								
	Ammonium Sulfate	17 lb/100 gal	C								
	Roundup PowerMAX	0.75 lb ae/a	D								
	NIS	0.25 % v/v	D								
	Ammonium Sulfate	17 lb/100 gal	D								
12	Untreated	0.0 b		0.0 b		0.0 c		0.0 b		0.0 b	
LSD (P=.05)	0.78	0.42		6.58		7.36		6.98			
Standard Deviation	0.53	0.27		4.27		4.78		4.74			
CV	0.71	0.46		7.73		8.45		6.62			
Bartlett's X2	0.0	0.0		1.997		1.592		6.449			
P(Bartlett's X2)	.	.		0.368		0.451		0.265			
Replicate F	1.000	2.667		0.646		0.323		0.019			
Replicate Prob(F)	0.4123	0.0951		0.6003		0.8085		0.9965			
Treatment F	30401.003	159467.688		560.605		467.487		348.511			
Treatment Prob(F)	0.0001	0.0001		0.0001		0.0001		0.0001			

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	TAROF	TAROF	TAROF	ALLVI	ALLVI	BROTE
Pest Scientific Name	Taraxacum offi>	Taraxacum offi>	Taraxacum offi>	Allium vineale	Allium vineale	Bromus tectorum
Pest Name	Common dandel>	Common dandel>	Common dandel>	Wild garlic	Wild garlic	Downy brome
Crop Code	GLXMA	GLXMA	GLXMA	N/A	N/A	N/A
Crop Scientific Name	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean			
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	6/9/09	7/6/09	7/28/09	4/23/09	5/15/09	5/15/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Sample Size, Unit						
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V1	V3-V4	R2	N/A	N/A	N/A
Crop Stage Minimum/Maximum	2-4"	12-16"	20-24"			
Pest Stage Majority	COTY-SEE	SEED	VEG	VEG	VEG	VEG
Pest Stage Minimum/Maximum	0-8"	6-18"	6-24"	5-24"	1-2'	8-12"
Pest Density, Unit	6 YD2	5 YD2	5 YD2	35 YD2	3. FT2	25 FT2
Footnote Number						
Assessed By	MK	MK	MK	MK	WGJ	WGJ
Rating Timing						
Days After First/Last Applic.	62 14	89 41	111 22	15 15	37 22	37 22
Trt-Eval Interval					37 DA-A	37 DA-A
Plant-Eval Interval	14 DP-1	41 DP-1	63 DP-1	-33 DP-1	-11 DP-1	-11 DP-1
Days After Emergence	9 DE-1	36 DE-	58 DE-	-38 DE	-16 DE	-16 DE
Number of Decimals						
Trt No.	24	30	33	7	9	12
Treatment Name	Untreated					
Rate	0.0	0.0	0.0	0.0	0.0	0.0
Unit	b	c	c	b	b	b
Appl Code						
1 Untreated	0.0 b	0.0 c	0.0 c	0.0 b	0.0 b	0.0 b
2 Sharpen	97.5 a	97.5 a	95.0 ab	76.3 a		
Roundup PowerMAX	0.75 lb ae/a A					
COC	1 % v/v A					
Ammonium Sulfate	17 lb/100 gal A					
Roundup PowerMAX	0.75 lb ae/a D					
NIS	0.25 % v/v D					
Ammonium Sulfate	17 lb/100 gal D					
3 OpTill	98.0 a	96.3 a	97.0 a	78.8 a		
Roundup PowerMAX	0.75 lb ae/a A					
COC	1 % v/v A					
Ammonium Sulfate	17 lb/100 gal A					
Roundup PowerMAX	0.75 lb ae/a D					
NIS	0.25 % v/v D					
Ammonium Sulfate	17 lb/100 gal D					
4 Roundup PowerMAX	96.8 a	100.0 a	97.8 a	87.3 a		
2,4-D Ester	0.5 lb ae/a A					
NIS	0.25 % v/v A					
Ammonium Sulfate	17 lb/100 gal A					
Roundup PowerMAX	0.75 lb ae/a D					
NIS	0.25 % v/v D					
Ammonium Sulfate	17 lb/100 gal D					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	TAROF	TAROF	TAROF	ALLVI	ALLVI	BROTE
Pest Scientific Name	Taraxacum offi>	Taraxacum offi>	Taraxacum offi>	Allium vineale	Allium vineale	Bromus tectorum
Pest Name	Common dandeli>	Common dandeli>	Common dandeli>	Wild garlic	Wild garlic	Downy brome
Crop Code	GLXMA	GLXMA	GLXMA	N/A	N/A	N/A
Crop Scientific Name	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean			
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	6/9/09	7/6/09	7/28/09	4/23/09	5/15/09	5/15/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Sample Size, Unit						
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V1	V3-V4	R2	N/A	N/A	N/A
Crop Stage Minimum/Maximum	2-4"	12-16"	20-24"			
Pest Stage Majority	COTY-SEE	SEED	VEG	VEG	VEG	VEG
Pest Stage Minimum/Maximum	0-8"	6-18"	6-24"	5-24"	1-2'	8-12"
Pest Density, Unit	6 YD2	5 YD2	5 YD2	35 YD2	3. FT2	25 FT2
Footnote Number						
Assessed By	MK	MK	MK	MK	WGJ	WGJ
Rating Timing						
Days After First/Last Applic.	62 14	89 41	111 22	15 15	37 22	37 22
Trt-Eval Interval					37 DA-A	37 DA-A
Plant-Eval Interval	14 DP-1	41 DP-1	63 DP-1	-33 DP-1	-11 DP-1	-11 DP-1
Days After Emergence	9 DE-1	36 DE-	58 DE-	-38 DE	-16 DE	-16 DE
Number of Decimals						
Trt No.	24	30	33	7	9	12
Treatment Name						
Rate						
Unit						
Appl Code						
5 Sharpen	0.0223 lb ai/a					
Roundup PowerMAX	0.75 lb ae/a					
COC	1 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
6 OpTill	1.36 oz ai/a					
Roundup PowerMAX	0.75 lb ae/a					
COC	1 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
7 Roundup PowerMAX	0.75 lb ae/a					
2,4-D Ester	0.5 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
8 Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					
Roundup PowerMAX	0.75 lb ae/a					
NIS	0.25 % v/v					
Ammonium Sulfate	17 lb/100 gal					



Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	BROTE	BROTE	ERICA	ERICA	ERICA					
Pest Scientific Name	Bromus tectorum	Bromus tectorum	Conyza canadensis	Conyza canadensis	Conyza canadensis					
Pest Name	Downy brome	Downy brome	Canada horseweed	Horseweed	Horseweed					
Crop Code	N/A	GLXMA	N/A	N/A	GLXMA					
Crop Scientific Name		Glycine max			Glycine max					
Crop Name		Soybean			Soybean					
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P					
Rating Date	5/26/09	6/9/09	5/15/09	5/26/09	6/9/09					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%					
Sample Size, Unit										
Number of Subsamples	1	1	1	1	1					
Crop Stage Majority	N/A	V1	N/A	N/A	V1					
Crop Stage Minimum/Maximum		2-4"			2-4"					
Pest Stage Majority	COTY-FLO	FLOW-SEE	VEG	COTY-BOL	COTY-BOL					
Pest Stage Minimum/Maximum	10-36"	10-36"	.5-3"	0-18"	0-24"					
Pest Density, Unit	35 FT2	27 FT2	5 M2	5 YD2	15 YD2					
Footnote Number										
Assessed By	MK	MK	WGJ	MK	MK					
Rating Timing										
Days After First/Last Applic.	48 33	62 14	37 22	48 33	62 14					
Trt-Eval Interval			37 DA-A							
Plant-Eval Interval	0 DP-1	14 DP-1	-11 DP-1	0 DP-1	14 DP-1					
Days After Emergence	-5 DE-	9 DE-1	-16 DE	-5 DE-	9 DE-1					
Number of Decimals										
Trt No.	Treatment Name	Rate	Unit	Appl Code	19	28	13	15	23	
1	Untreated	0.0	b		0.0	b	0.0	b	0.0	c
2	Sharpen	0.0223	lb ai/a	A	100.0	a	100.0	a	100.0	a
	Roundup PowerMAX	0.75	lb ae/a	A						
	COC	1	% v/v	A						
	Ammonium Sulfate	17	lb/100 gal	A						
	Roundup PowerMAX	0.75	lb ae/a	D						
	NIS	0.25	% v/v	D						
	Ammonium Sulfate	17	lb/100 gal	D						
3	OpTill	1.36	oz ai/a	A	100.0	a	100.0	a	100.0	a
	Roundup PowerMAX	0.75	lb ae/a	A						
	COC	1	% v/v	A						
	Ammonium Sulfate	17	lb/100 gal	A						
	Roundup PowerMAX	0.75	lb ae/a	D						
	NIS	0.25	% v/v	D						
	Ammonium Sulfate	17	lb/100 gal	D						
4	Roundup PowerMAX	0.75	lb ae/a	A	100.0	a	100.0	a	97.3	a
	2,4-D Ester	0.5	lb ae/a	A						
	NIS	0.25	% v/v	A						
	Ammonium Sulfate	17	lb/100 gal	A						
	Roundup PowerMAX	0.75	lb ae/a	D						
	NIS	0.25	% v/v	D						
	Ammonium Sulfate	17	lb/100 gal	D						

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	BROTE	BROTE	ERICA	ERICA	ERICA
Pest Scientific Name	Bromus tectorum	Bromus tectorum	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Downy brome	Downy brome	Canada horseweed	Horseweed	Horseweed
Crop Code	N/A	GLXMA	N/A	N/A	GLXMA
Crop Scientific Name		Glycine max			Glycine max
Crop Name		Soybean			Soybean
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	5/26/09	6/9/09	5/15/09	5/26/09	6/9/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	N/A	V1	N/A	N/A	V1
Crop Stage Minimum/Maximum		2-4"			2-4"
Pest Stage Majority	COTY-FLO	FLOW-SEE	VEG	COTY-BOL	COTY-BOL
Pest Stage Minimum/Maximum	10-36"	10-36"	.5-3"	0-18"	0-24"
Pest Density, Unit	35 FT2	27 FT2	5 M2	5 YD2	15 YD2
Footnote Number					
Assessed By	MK	MK	WGJ	MK	MK
Rating Timing					
Days After First/Last Applic.	48 33	62 14	37 22	48 33	62 14
Trt-Eval Interval			37 DA-A		
Plant-Eval Interval	0 DP-1	14 DP-1	-11 DP-1	0 DP-1	14 DP-1
Days After Emergence	-5 DE-	9 DE-1	-16 DE	-5 DE-	9 DE-1
Number of Decimals					
Trt No.	19	28	13	15	23
Treatment Name					
Rate					
Rate Unit					
Appl Code					
5 Sharpen	0.0223 lb ai/a				
Roundup PowerMAX	0.75 lb ae/a				
COC	1 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
6 OpTill	1.36 oz ai/a				
Roundup PowerMAX	0.75 lb ae/a				
COC	1 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
7 Roundup PowerMAX	0.75 lb ae/a				
2,4-D Ester	0.5 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
8 Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	BROTE	BROTE	ERICA	ERICA	ERICA
Pest Scientific Name	Bromus tectorum	Bromus tectorum	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Downy brome	Downy brome	Canada horseweed	Horseweed	Horseweed
Crop Code	N/A	GLXMA	N/A	N/A	GLXMA
Crop Scientific Name		Glycine max			Glycine max
Crop Name		Soybean			Soybean
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	5/26/09	6/9/09	5/15/09	5/26/09	6/9/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	N/A	V1	N/A	N/A	V1
Crop Stage Minimum/Maximum		2-4"			2-4"
Pest Stage Majority	COTY-FLO	FLOW-SEE	VEG	COTY-BOL	COTY-BOL
Pest Stage Minimum/Maximum	10-36"	10-36"	.5-3"	0-18"	0-24"
Pest Density, Unit	35 FT2	27 FT2	5 M2	5 YD2	15 YD2
Footnote Number					
Assessed By	MK	MK	WGJ	MK	MK
Rating Timing					
Days After First/Last Applic.	48 33	62 14	37 22	48 33	62 14
Trt-Eval Interval			37 DA-A		
Plant-Eval Interval	0 DP-1	14 DP-1	-11 DP-1	0 DP-1	14 DP-1
Days After Emergence	-5 DE-	9 DE-1	-16 DE	-5 DE-	9 DE-1
Number of Decimals					
Trt No.	19	28	13	15	23
Treatment Name					
Rate					
Rate Unit					
Appl Code					
9 Roundup PowerMAX	0.75 lb ae/a	100.0 a			100.0 a
2,4-D Ester	0.5 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
10 Sharpen	0.0223 lb ai/a	100.0 a			100.0 a
Roundup PowerMAX	0.75 lb ae/a				
COC	1 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
11 OpTill	1.36 oz ai/a	100.0 a			100.0 a
Roundup PowerMAX	0.75 lb ae/a				
COC	1 % v/v				
Ammonium Sulfate	17 lb/100 gal				
Roundup PowerMAX	0.75 lb ae/a				
NIS	0.25 % v/v				
Ammonium Sulfate	17 lb/100 gal				
12 Untreated	0.0 b	0.0 b	0.0 b	0.0 b	0.0 c
LSD (P=.05)	0.34	0.00	0.00	2.54	1.29
Standard Deviation	0.23	0.00	0.00	1.73	0.89
CV	0.31	0.0	0.0	2.32	1.08
Bartlett's X2	0.0	0.0	0.0	13.595	9.709
P(Bartlett's X2)	.	.	.	0.001*	0.084
Replicate F	2.333	0.000	0.000	1.295	3.667
Replicate Prob(F)	0.1032	1.0000	1.0000	0.3022	0.0220
Treatment F	159734.344	0.000	0.000	2838.139	7481.248
Treatment Prob(F)	0.0001	1.0000	1.0000	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	AMBEL	AMBEL	AMBEL
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Ambrosia artemisiifolia	Ambrosia artemisiifolia	Ambrosia artemisiifolia
Pest Name	Canada horseweed	Canada horseweed	Common ragweed	Common ragweed	Common ragweed
Crop Code	GLXMA	GLXMA	N/A	GLXMA	GLXMA
Crop Scientific Name	Glycine max	Glycine max		Glycine max	Glycine max
Crop Name	Soybean	Soybean		Soybean	Soybean
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	7/6/09	7/28/09	5/26/09	6/9/09	7/6/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	V3-V4	R2	N/A	V1	V3-V4
Crop Stage Minimum/Maximum	12-16"	20-24"		2-4"	12-16"
Pest Stage Majority	BOLT	BOLT	COTY	COTY-6ND	COTY-6ND
Pest Stage Minimum/Maximum	0-20"	6-48"	0-2"	0-16"	2-28"
Pest Density, Unit	5 YD2	5 YD2	6 YD2	6 YD2	5 YD2
Footnote Number					
Assessed By	MK	MK	MK	MK	MK
Rating Timing					
Days After First/Last Applic.	89 41	111 22	48 33	62 14	89 41
Trt-Eval Interval					
Plant-Eval Interval	41 DP-1	63 DP-1	0 DP-1	14 DP-1	41 DP-1
Days After Emergence	36 DE-	58 DE-	-5 DE-	9 DE-1	36 DE-
Number of Decimals					
Trt No.	Treatment	Rate	Unit	Appl Code	
29					
32					
21					
25					
31					
1	Untreated	0.0	b		0.0 c
2	Sharpen	0.0223	lb ai/a	A	97.5 a
	Roundup PowerMAX	0.75	lb ae/a	A	
	COC	1	% v/v	A	
	Ammonium Sulfate	17	lb/100 gal	A	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	99.8 a
3	OpTill	1.36	oz ai/a	A	98.8 a
	Roundup PowerMAX	0.75	lb ae/a	A	
	COC	1	% v/v	A	
	Ammonium Sulfate	17	lb/100 gal	A	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	99.8 a
4	Roundup PowerMAX	0.75	lb ae/a	A	89.5 a
	2,4-D Ester	0.5	lb ae/a	A	
	NIS	0.25	% v/v	A	
	Ammonium Sulfate	17	lb/100 gal	A	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	98.3 a
					96.5 a
					97.8 ab
					96.3 ab

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	AMBEL	AMBEL	AMBEL
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Ambrosia artemisiifolia	Ambrosia artemisiifolia	Ambrosia artemisiifolia
Pest Name	Canada horseweed	Canada horseweed	Common ragweed	Common ragweed	Common ragweed
Crop Code	GLXMA	GLXMA	N/A	GLXMA	GLXMA
Crop Scientific Name	Glycine max	Glycine max		Glycine max	Glycine max
Crop Name	Soybean	Soybean		Soybean	Soybean
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	7/6/09	7/28/09	5/26/09	6/9/09	7/6/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	V3-V4	R2	N/A	V1	V3-V4
Crop Stage Minimum/Maximum	12-16"	20-24"		2-4"	12-16"
Pest Stage Majority	BOLT	BOLT	COTY	COTY-6ND	COTY-6ND
Pest Stage Minimum/Maximum	0-20"	6-48"	0-2"	0-16"	2-28"
Pest Density, Unit	5 YD2	5 YD2	6 YD2	6 YD2	5 YD2
Footnote Number					
Assessed By	MK	MK	MK	MK	MK
Rating Timing					
Days After First/Last Applic.	89 41	111 22	48 33	62 14	89 41
Trt-Eval Interval					
Plant-Eval Interval	41 DP-1	63 DP-1	0 DP-1	14 DP-1	41 DP-1
Days After Emergence	36 DE-	58 DE-	-5 DE-	9 DE-1	36 DE-
Number of Decimals					
Trt No.	29	32	21	25	31
Treatment Name					
Rate					
Rate Unit					
Appl Code					
5 Sharpen	100.0 a	100.0 a	99.8 a	97.0 ab	85.8 ab
Roundup PowerMAX					
COC					
Ammonium Sulfate					
Roundup PowerMAX					
NIS					
Ammonium Sulfate					
6 OpTill	94.3 a	99.0 a	99.5 a	98.5 a	84.3 ab
Roundup PowerMAX					
COC					
Ammonium Sulfate					
Roundup PowerMAX					
NIS					
Ammonium Sulfate					
7 Roundup PowerMAX	90.5 a	99.0 a	98.1 a	93.0 b	85.5 ab
2,4-D Ester					
NIS					
Ammonium Sulfate					
Roundup PowerMAX					
NIS					
Ammonium Sulfate					
8 Roundup PowerMAX	94.0 a	98.3 a		99.0 a	95.0 ab
NIS					
Ammonium Sulfate					
Roundup PowerMAX					
NIS					
Ammonium Sulfate					

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	AMBEL	AMBEL	AMBEL
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Ambrosia artemisiifolia	Ambrosia artemisiifolia	Ambrosia artemisiifolia
Pest Name	Canada horseweed	Canada horseweed	Common ragweed	Common ragweed	Common ragweed
Crop Code	GLXMA	GLXMA	N/A	GLXMA	GLXMA
Crop Scientific Name	Glycine max	Glycine max		Glycine max	Glycine max
Crop Name	Soybean	Soybean		Soybean	Soybean
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	7/6/09	7/28/09	5/26/09	6/9/09	7/6/09
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size, Unit					
Number of Subsamples	1	1	1	1	1
Crop Stage Majority	V3-V4	R2	N/A	V1	V3-V4
Crop Stage Minimum/Maximum	12-16"	20-24"		2-4"	12-16"
Pest Stage Majority	BOLT	BOLT	COTY	COTY-6ND	COTY-6ND
Pest Stage Minimum/Maximum	0-20"	6-48"	0-2"	0-16"	2-28"
Pest Density, Unit	5 YD2	5 YD2	6 YD2	6 YD2	5 YD2
Footnote Number					
Assessed By	MK	MK	MK	MK	MK
Rating Timing					
Days After First/Last Applic.	89 41	111 22	48 33	62 14	89 41
Trt-Eval Interval					
Plant-Eval Interval	41 DP-1	63 DP-1	0 DP-1	14 DP-1	41 DP-1
Days After Emergence	36 DE-	58 DE-	-5 DE-	9 DE-1	36 DE-
Number of Decimals					
Trt No.	Treatment Name	Rate	Unit	Appl Code	
		29			32
		21			25
		31			
9	Roundup PowerMAX	0.75	lb ae/a	C	96.8 a
	2,4-D Ester	0.5	lb ae/a	C	99.0 a
	NIS	0.25	% v/v	C	
	Ammonium Sulfate	17	lb/100 gal	C	
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
10	Sharpen	0.0223	lb ai/a	C	100.0 a
	Roundup PowerMAX	0.75	lb ae/a	C	100.0 a
	COC	1	% v/v	C	
	Ammonium Sulfate	17	lb/100 gal	C	97.0 ab
	Roundup PowerMAX	0.75	lb ae/a	D	97.5 ab
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
11	OpTill	1.36	oz ai/a	C	100.0 a
	Roundup PowerMAX	0.75	lb ae/a	C	100.0 a
	COC	1	% v/v	C	
	Ammonium Sulfate	17	lb/100 gal	C	100.0 a
	Roundup PowerMAX	0.75	lb ae/a	D	
	NIS	0.25	% v/v	D	
	Ammonium Sulfate	17	lb/100 gal	D	
12	Untreated				0.0 b
					0.0 b
					0.0 b
					0.0 c
					0.0 c
LSD (P=.05)		6.73			1.33
Standard Deviation		4.66			0.92
CV		5.82			1.12
Bartlett's X2		11.618			9.202
P(Bartlett's X2)		0.071			0.163
Replicate F		1.231			0.622
Replicate Prob(F)		0.3141			0.5885
Treatment F		260.039			6998.209
Treatment Prob(F)		0.0001			0.0001
					5.98
					4.06
					5.55
					21.929
					0.001*
					3.56
					2.46
					3.03
					17.057
					0.017*
					13.86
					9.60
					12.79
					23.414
					0.003*
					0.215
					0.8852
					55.497
					0.0001

Pest Type	W Weed	W Weed	W Weed				
Pest Code	AMBEL	POAAN	PANDI				
Pest Scientific Name	Ambrosia artem>	Poa annua	Panicum dichot>				
Pest Name	Common ragweed	Annual bluegra>	Fall panicum				
Crop Code	GLXMA	N/A	GLXMA				
Crop Scientific Name	Glycine max		Glycine max				
Crop Name	Soybean		Soybean				
Part Rated	PLOT P	PLOT P	PLOT P				
Rating Date	7/28/09	5/26/09	7/28/09				
Rating Type	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%				
Sample Size, Unit							
Number of Subsamples	1	1	1				
Crop Stage Majority	R2	N/A	R2				
Crop Stage Minimum/Maximum	20-24"		20-24"				
Pest Stage Majority	VEG	VEG-SEED	TILL-FLO				
Pest Stage Minimum/Maximum	6-40"	0-4"	6-40"				
Pest Density, Unit	7 YD2	27 FT2	13 YD2				
Footnote Number							
Assessed By	MK	MK	MK				
Rating Timing							
Days After First/Last Applic.	111 22	48 33	111 22				
Trt-Eval Interval							
Plant-Eval Interval	63 DP-1	0 DP-1	63 DP-1				
Days After Emergence	58 DE-	-5 DE-	58 DE-				
Number of Decimals							
Trt No.	Treatment Name	Rate	Unit	Appl Code	34	22	35
1	Untreated	0.0	b		0.0	b	0.0
2	Sharpen	0.0223	lb ai/a	A	98.8	a	100.0
	Roundup PowerMAX	0.75	lb ae/a	A			
	COC	1	% v/v	A			
	Ammonium Sulfate	17	lb/100 gal	A			
	Roundup PowerMAX	0.75	lb ae/a	D			
	NIS	0.25	% v/v	D			
	Ammonium Sulfate	17	lb/100 gal	D			
3	OpTill	1.36	oz ai/a	A	100.0	a	100.0
	Roundup PowerMAX	0.75	lb ae/a	A			
	COC	1	% v/v	A			
	Ammonium Sulfate	17	lb/100 gal	A			
	Roundup PowerMAX	0.75	lb ae/a	D			
	NIS	0.25	% v/v	D			
	Ammonium Sulfate	17	lb/100 gal	D			
4	Roundup PowerMAX	0.75	lb ae/a	A	99.5	a	100.0
	2,4-D Ester	0.5	lb ae/a	A			
	NIS	0.25	% v/v	A			
	Ammonium Sulfate	17	lb/100 gal	A			
	Roundup PowerMAX	0.75	lb ae/a	D			
	NIS	0.25	% v/v	D			
	Ammonium Sulfate	17	lb/100 gal	D			





Means followed by same letter do not significantly differ ( $P=0.05$ , Student-Newman-Keuls)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.