

MSU Weed Science Research Program

Control of Common Lambsquarters in Roundup Ready Soybean

Trial ID: SOY08-06
 Conducted: T-12 center

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Date Planted: 5/9/2006
Variety: Garst 1827 RR/STS
Population: 155,000 seed/acre
Soil Type: Loam
Plot Size: 10 X 35 FT
Row Spacing: 30 IN
No. of Reps: 4
% OM: 3.5
pH: 6.8
Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall moldboard plow
 Soil finish 5/8/06, 5/9/06
Fertilizer: None at planting

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	BRAKA/SINAR	MUSTARD, WILD	BRASSICA KABER
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	ANGR	Annual grass	mainly foxtail, panicum
4.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
5.	AMBEL	RAGWEEED, COMMON	AMBROSIA ELATIOR L.
6.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
7.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
8.	LAMAM	HENBIT	LAMIUM AMPLEXICAULE L.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C	D
Application Timing:	PRE	E. POST	M. POST	L. POST
Date Treated:	5/9/2006	6/9/2006	6/14/2006	7/6/2006
Time Treated:	8:45 pm	11:15 am	11:15 am	10:45 am
% Cloud Cover:	90	100	0	0
Air Temp., Unit:	65 F	64 F	72 F	72 F
% Relative Humidity:	59	53	32	40
Wind Speed/Unit/Dir:	6 mph SE	6 mph N	2 mph E	5 mph N
Soil Temp., Unit:	64 F	64 F	69 F	69 F
Soil/Leaf Surface M:	5 -	5 5	5 5	5 5
Soil Moist (1=w 5=d):	4	5	5	5

Crop Stage at Each Application

	A	B	C	D
Crop Name:	GLXMA	GLXMA	GLXMA	GLXMA
Height (In.):	-	4-6"	6-8"	15-17"
Stage (L):	-	1-2 tri	2 tri	R 1

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Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	BRAKA/SINAR	BRAKA/SINAR	BRAKA/SINAR	BRAKA/SINAR
Height (In.):	-	1-6"	1-14"	-
Stage (L):	-	6-10	6-flower	-
Weed 2 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):	-	1-3"	1-4"	4-6"
Stage (L):	-	6-12	6-20	many
Weed 3 Name:	ANGR	ANGR	ANGR	ANGR
Height (In.):	-	2-4"	1-10"	-
Stage (L):	-	2-5	3-7	-
Weed 4 Name:	AMARE	AMARE	AMARE	AMARE
Height (In.):	-	1-3"	1-3"	1-2.5"
Stage (L):	-	4-8	4-8	4-6
Weed 5 Name:	AMBEL	AMBEL	AMBEL	AMBEL
Height (In.):	-	1-4"	2-5"	-
Stage (L):	-	4-8	4-8	-
Weed 6 Name:	ABUTH	ABUTH	ABUTH	ABUTH
Height (In.):	-	1-3"	2-3"	1-2"
Stage (L):	-	2-4	2-4	2-3
Weed 7 Name:	SOLPT	SOLPT	SOLPT	SOLPT
Height (In.):	-	.5-1.5"	.5"	-
Stage (L):	-	2-4	4	-
Weed 8 Name:	LAMAM	LAMAM	LAMAM	LAMAM
Height (In.):	-	1-2"	2"	-
Stage (L):	-	6-8	many	-

Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	7/21/2006	7/21/2006	7/21/2006	7/21/2006	7/21/2006
Weed Name:	CHEAL	ABUTH	ANGR	BRAKA	AMBEL
Density:	2	1	9	2	3

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Boom				
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	CUB	3.8	AirMix	11003	20"	20"	100"	19	water	27
B	CUB	3.8	AirMix	11003	22"	20"	100"	19	water	27
C	Cub	3.8	AirMix	11003	24"	20"	120"	19	water	27
D	Cub	3.8	AirMix	11003	29"	20"	120"	19	water	27

Comments: Spread Lambsquarters seed at planting

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Weed Code						CHEAL		ANGR	CHEAL	AMARE	AMBEL	ABUTH
Crop Code							GLXMA					
Rating Data Type							injury	control	control	control	control	control
Rating Unit						percent	percent	percent	percent	percent	percent	percent
Rating Date						6/14/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006
Trt-Eval Interval						36 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A
Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code						
1	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C	0	5	98	63	99	95
1	AMS		17	lb/100 gal	MPOS	C						90
1	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D						
1	AMS		17	lb/100 gal	LPOS	D						
2	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B		13	99	87	99	98
2	Raptor	1	4	fl oz/a	EPOS	B						98
2	AMS		17	lb/100 gal	EPOS	B						
3	Valor	51	2	oz/a	PRE	A	99	0	93	98	99	98
3	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						98
3	AMS		17	lb/100 gal	MPOS	C						
4	Valor	51	2	oz/a	PRE	A		10	99	99	99	99
4	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B						99
4	Raptor	1	4	fl oz/a	EPOS	B						99
4	AMS		17	lb/100 gal	EPOS	B						
5	Valor	51	2	oz/a	PRE	A		8	99	99	99	97
5	Raptor	1	4	fl oz/a	EPOS	B						98
5	Activator 90		0.25	% v/v	EPOS	B						
5	AMS		17	lb/100 gal	EPOS	B						
6	Prowl H2O	3.8	2	pt/a	PRE	A		1	99	99	99	99
6	Valor	51	2	oz/a	PRE	A						99
6	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						99
6	AMS		17	lb/100 gal	MPOS	C						
7	Prowl H2O	3.8	2	pt/a	PRE	A	99	5	99	99	99	97
7	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						98
7	AMS		17	lb/100 gal	MPOS	C						
8	Prowl H2O	3.8	2	pt/a	PRE	A		15	96	99	72	75
8	Raptor	1	4	fl oz/a	EPOS	B						99
8	Activator 90		0.25	% v/v	EPOS	B						
8	AMS		17	lb/100 gal	EPOS	B						
9	Canopy	75	3	oz/a	PRE	A		1	99	99	99	99
9	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B						99
9	Harmony GT(50%)	50	0.12	oz/a	EPOS	B						
9	AMS		17	lb/100 gal	EPOS	B						
10	Boundary	6.5	2	pt/a	PRE	A		6	99	99	99	99
10	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						99
10	AMS		17	lb/100 gal	MPOS	C						
11	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B		8	96	95	99	96
11	Harmony GT(50%)	50	0.12	oz/a	EPOS	B						95
11	AMS		17	lb/100 gal	EPOS	B						
12	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B		11	98	76	95	89
12	Basagran	4	1	qt/a	EPOS	B						92
12	AMS		17	lb/100 gal	EPOS	B						
13	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B		13	98	83	91	80
13	Resource	0.86	8	fl oz/a	EPOS	B						95
13	AMS		17	lb/100 gal	EPOS	B						
14	Untreated							0	0	0	0	0

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Weed Code	CHEAL		ANGR	CHEAL	AMARE	AMBEL	ABUTH
Crop Code		GLXMA					
Rating Data Type		injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/14/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006	6/27/2006
Trt-Eval Interval	36 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A	49 DA-A

Trt No.	Treatment Name	Form Conc	Rate Unit	Grow Stg	Appl Code							
LSD (P=.05)						0.0	6.3	4.2	5.7	12.2	12.2	5.1
Standard Deviation						0.0	4.4	2.9	4.0	8.5	8.5	3.6
CV						0.0	65.24	3.21	4.66	9.57	9.8	3.98

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Weed Code						BRAKA	GLXMA	ANGR	CHEAL	AMARE	AMBEL	ABUTH
Crop Code						control	injury	control	control	control	control	control
Rating Data Type						percent	percent	percent	percent	percent	percent	percent
Rating Unit						6/27/2006	7/12/2006	7/12/2006	7/12/2006	7/12/2006	7/12/2006	7/12/2006
Rating Date						49 DA-A	64 DA-A	64 DA-A	64 DA-A	64 DA-A	64 DA-A	64 DA-A
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code						
1	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C	92	3	98	89	99	98
1	AMS		17	lb/100 gal	MPOS	C						
1	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D						
1	AMS		17	lb/100 gal	LPOS	D						
2	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	99	3	98	83	98	98
2	Raptor	1	4	fl oz/a	EPOS	B						
2	AMS		17	lb/100 gal	EPOS	B						
3	Valor	51	2	oz/a	PRE	A	99	1	91	96	99	97
3	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						
3	AMS		17	lb/100 gal	MPOS	C						
4	Valor	51	2	oz/a	PRE	A	99	3	97	99	99	98
4	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B						
4	Raptor	1	4	fl oz/a	EPOS	B						
4	AMS		17	lb/100 gal	EPOS	B						
5	Valor	51	2	oz/a	PRE	A	99	3	96	99	99	94
5	Raptor	1	4	fl oz/a	EPOS	B						
5	Activator 90		0.25	% v/v	EPOS	B						
5	AMS		17	lb/100 gal	EPOS	B						
6	Prowl H2O	3.8	2	pt/a	PRE	A	99	1	98	99	99	99
6	Valor	51	2	oz/a	PRE	A						
6	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						
6	AMS		17	lb/100 gal	MPOS	C						
7	Prowl H2O	3.8	2	pt/a	PRE	A	93	3	98	98	97	98
7	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						
7	AMS		17	lb/100 gal	MPOS	C						
8	Prowl H2O	3.8	2	pt/a	PRE	A	98	4	98	98	99	33
8	Raptor	1	4	fl oz/a	EPOS	B						
8	Activator 90		0.25	% v/v	EPOS	B						
8	AMS		17	lb/100 gal	EPOS	B						
9	Canopy	75	3	oz/a	PRE	A	99	0	96	99	99	99
9	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B						
9	Harmony GT(50%)	50	0.12	oz/a	EPOS	B						
9	AMS		17	lb/100 gal	EPOS	B						
10	Boundary	6.5	2	pt/a	PRE	A	99	2	99	98	97	99
10	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C						
10	AMS		17	lb/100 gal	MPOS	C						
11	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	99	3	95	93	92	98
11	Harmony GT(50%)	50	0.12	oz/a	EPOS	B						
11	AMS		17	lb/100 gal	EPOS	B						
12	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	98	3	94	77	88	92
12	Basagran	4	1	qt/a	EPOS	B						
12	AMS		17	lb/100 gal	EPOS	B						
13	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	99	2	96	84	78	82
13	Resource	0.86	8	fl oz/a	EPOS	B						
13	AMS		17	lb/100 gal	EPOS	B						
14	Untreated						0	0	0	0	0	0

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Weed Code							
Crop Code						GLXMA	GLXMA
Rating Data Type						moisture	yield
Rating Unit						percent	bu/acre
Rating Date						10/26/2006	10/26/2006
Trt-Eval Interval						170 DA-A	at 13% M

Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code		
1	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C	15.7	63.1
1	AMS		17	lb/100 gal	MPOS	C		
1	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D		
1	AMS		17	lb/100 gal	LPOS	D		
2	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	15.6	62.1
2	Raptor	1	4	fl oz/a	EPOS	B		
2	AMS		17	lb/100 gal	EPOS	B		
3	Valor	51	2	oz/a	PRE	A	16.2	60.0
3	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C		
3	AMS		17	lb/100 gal	MPOS	C		
4	Valor	51	2	oz/a	PRE	A	15.4	63.5
4	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B		
4	Raptor	1	4	fl oz/a	EPOS	B		
4	AMS		17	lb/100 gal	EPOS	B		
5	Valor	51	2	oz/a	PRE	A	15.5	58.7
5	Raptor	1	4	fl oz/a	EPOS	B		
5	Activator 90		0.25	% v/v	EPOS	B		
5	AMS		17	lb/100 gal	EPOS	B		
6	Prowl H2O	3.8	2	pt/a	PRE	A	15.8	62.5
6	Valor	51	2	oz/a	PRE	A		
6	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C		
6	AMS		17	lb/100 gal	MPOS	C		
7	Prowl H2O	3.8	2	pt/a	PRE	A	15.7	63.2
7	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C		
7	AMS		17	lb/100 gal	MPOS	C		
8	Prowl H2O	3.8	2	pt/a	PRE	A	15.8	51.0
8	Raptor	1	4	fl oz/a	EPOS	B		
8	Activator 90		0.25	% v/v	EPOS	B		
8	AMS		17	lb/100 gal	EPOS	B		
9	Canopy	75	3	oz/a	PRE	A	15.9	64.8
9	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B		
9	Harmony GT(50%)	50	0.12	oz/a	EPOS	B		
9	AMS		17	lb/100 gal	EPOS	B		
10	Boundary	6.5	2	pt/a	PRE	A	15.5	58.9
10	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	C		
10	AMS		17	lb/100 gal	MPOS	C		
11	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	15.7	62.0
11	Harmony GT(50%)	50	0.12	oz/a	EPOS	B		
11	AMS		17	lb/100 gal	EPOS	B		
12	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	15.7	60.5
12	Basagran	4	1	qt/a	EPOS	B		
12	AMS		17	lb/100 gal	EPOS	B		
13	Roundup OriginalMAX	4.5	22	fl oz/a	EPOS	B	15.4	60.9
13	Resource	0.86	8	fl oz/a	EPOS	B		
13	AMS		17	lb/100 gal	EPOS	B		
14	Untreated						17.6	15.2

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Weed Code		
Crop Code	GLXMA	GLXMA
Rating Data Type	moisture	yield
Rating Unit	percent	bu/acre
Rating Date	10/26/2006	10/26/2006
Trt-Eval Interval	170 DA-A	at 13% M

Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code		
LSD (P=.05)							0.48	5.91
Standard Deviation							0.34	4.13
CV							2.12	7.18