

MSU Weed Science Research Program

Comparison of Different Glyphosate Formulations

Trial ID: SOY13-07
 Conducted: C-18

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Date Planted: 5/8/07	Row Spacing: 30 IN
Variety: Pioneer 91M91	No. of Reps: 4
Population: 155,000 seeds/acre	% OM: 2.6
Soil Type: Sandy Clay Loam	pH: 6.7
Plot Size: 10 X 30 FT	Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall Chisel Plow, Spring Soil Finish x 2
Fertilizer: None at Planting

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
2.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	CHEAL	COMMON LAMBSQUARTERS	CHENOPODIUM ALBUM L.
5.	ANGR	mainly foxtail species	SETARIA SP.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

A

Application Timing: POST
Date Treated: 6/11/07
Time Treated: 1:00 pm
% Cloud Cover: 0
Air Temp., Unit: 82 F
% Relative Humidity: 42
Wind Speed/Unit/Dir: 6 mph NE
Soil Temp., Unit: 78 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 5

Crop Stage at Each Application

A

Crop Name: GLXMA
Height (In.): 5-7"
Stage (L): V2

Weed Stage at Each Application

A

Weed 1 Name: AMBEL
Height (In.): 2-6"
Stage (L): 6-many

Weed 2 Name: ABUTH
Height (In.): 1-6"
Stage (L): 2-6

Weed 3 Name: AMAPO
Height (In.): 1-4"
Stage (L): 4-10

Weed 4 Name: CHEAL
Height (In.): 1/2-3"
Stage (L): 2-many

Weed 5 Name: ANGR
Height (In.): 2-5"
Stage (L): 3-5

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Weed Density (plants/sq. ft.)

	1	2	3	4	5
Date:	7/9/07	7/9/07	7/9/07	7/9/07	7/9/07
Weed Name:	CHEAL	ABUTH	ANGR	AMAPO	AMBEL
Density:	3	4	20	6	13

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom				
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI	
A	Cub	3.8	AirMix	11003	27"	20"	100"	19	Water	27	

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Weed Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH	ANGR	AMBEL
Crop Code		GLXMA						
Rating Data Type		injury	control	control	control	control	control	control
Rating Unit		percent	percent	percent	percent	percent	percent	percent
Rating Date		6/18/07	6/18/07	6/18/07	6/18/07	6/18/07	6/25/07	6/25/07
Trt-Eval Interval		7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	14 DA-A	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	GLXMA injury percent	ANGR control percent	CHEAL control percent	AMAPO control percent	AMBEL control percent	ABUTH control percent	ANGR control percent	AMBEL control percent
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	POST	A	0	99	98	98	65	68	99	69
1	AMS		WG	17	lb/100 gal	POST	A								
2	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	0	99	98	99	76	74	99	75
2	AMS		WG	17	lb/100 gal	POST	A								
3	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	0	99	93	99	69	70	99	76
3	Activator 90		L	0.25	% v/v	POST	A								
3	AMS		WG	17	lb/100 gal	POST	A								
4	Touchdown Total	4.17	SL	24	fl oz/a	POST	A	0	99	99	99	74	76	99	75
4	AMS		WG	17	lb/100 gal	POST	A								
5	Untreated							0	0	0	0	0	0	0	0
6	Durango	4	SL	24	fl oz/a	POST	A	1	99	91	99	72	70	99	75
6	AMS		WG	17	lb/100 gal	POST	A								
7	GF-1280	4	SL	24	fl oz/a	POST	A	0	99	96	99	72	70	99	74
7	AMS		WG	17	lb/100 gal	POST	A								
8	Makaze	3	SL	32	fl oz/a	POST	A	1	99	98	99	63	73	99	65
8	AMS		WG	17	lb/100 gal	POST	A								
9	Buccaneer Plus	3	SL	32	fl oz/a	POST	A	0	99	92	98	65	69	99	73
9	AMS		WG	17	lb/100 gal	POST	A								
10	GlyStar Plus	3	SL	32	fl oz/a	POST	A	0	99	94	99	66	68	99	73
10	AMS		WG	17	lb/100 gal	POST	A								
11	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	2	99	92	99	68	71	99	79
11	MF-0019	75	WG	0.06	oz/a	POST	A								
11	AMS		WG	17	lb/100 gal	POST	A								
12	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	6	99	98	99	75	75	99	78
12	MF-0019	75	WG	0.08	oz/a	POST	A								
12	AMS		WG	17	lb/100 gal	POST	A								
13	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	10	99	95	99	74	75	99	76
13	MF-0019	75	WG	0.16	oz/a	POST	A								
13	AMS		WG	17	lb/100 gal	POST	A								
LSD (P=.05)								3.4	0.5	5.6	1.0	10.2	7.9	0.0	10.0
Standard Deviation								2.4	0.4	3.9	0.7	7.1	5.5	0.0	6.9
CV								160.71	0.42	4.44	0.76	11.08	8.35	0.0	10.14

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Weed Code	AMAPO	ABUTH	CHEAL	ANGR	AMBEL	AMAPO	ABUTH
Crop Code							
Rating Data Type	control	control	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/25/07	6/25/07	6/25/07	7/2/07	7/2/07	7/2/07	7/2/07
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	ABUTH	CHEAL	ANGR	AMBEL	AMAPO	ABUTH
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	POST	A	99	75	98	96	71	99	76
1	AMS		WG	17	lb/100 gal	POST	A							
2	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	99	79	99	91	83	99	77
2	AMS		WG	17	lb/100 gal	POST	A							
3	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	99	75	95	92	78	99	79
3	Activator 90		L	0.25	% v/v	POST	A							
3	AMS		WG	17	lb/100 gal	POST	A							
4	Touchdown Total	4.17	SL	24	fl oz/a	POST	A	99	83	98	95	80	99	83
4	AMS		WG	17	lb/100 gal	POST	A							
5	Untreated							0	0	0	0	0	0	0
6	Durango	4	SL	24	fl oz/a	POST	A	99	71	98	92	76	99	68
6	AMS		WG	17	lb/100 gal	POST	A							
7	GF-1280	4	SL	24	fl oz/a	POST	A	99	79	97	90	73	97	74
7	AMS		WG	17	lb/100 gal	POST	A							
8	Makaze	3	SL	32	fl oz/a	POST	A	99	78	99	94	66	99	75
8	AMS		WG	17	lb/100 gal	POST	A							
9	Buccaneer Plus	3	SL	32	fl oz/a	POST	A	99	78	97	94	73	98	80
9	AMS		WG	17	lb/100 gal	POST	A							
10	GlyStar Plus	3	SL	32	fl oz/a	POST	A	99	79	95	90	74	99	78
10	AMS		WG	17	lb/100 gal	POST	A							
11	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	99	73	97	93	79	99	77
11	MF-0019	75	WG	0.06	oz/a	POST	A							
11	AMS		WG	17	lb/100 gal	POST	A							
12	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	99	77	97	90	75	99	73
12	MF-0019	75	WG	0.08	oz/a	POST	A							
12	AMS		WG	17	lb/100 gal	POST	A							
13	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	99	74	99	94	80	99	78
13	MF-0019	75	WG	0.16	oz/a	POST	A							
13	AMS		WG	17	lb/100 gal	POST	A							
LSD (P=.05)								0.0	11.7	4.3	9.8	9.7	1.9	10.0
Standard Deviation								0.0	8.1	3.0	6.8	6.8	1.3	6.9
CV								0.0	11.49	3.33	8.0	9.7	1.45	9.76

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Weed Code CHEAL
 Crop Code
 Rating Data Type control
 Rating Unit percent
 Rating Date 7/2/07
 Trt-Eval Interval 21 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1	Roundup WeatherMax	4.5	SL	22	fl oz/a	POST	A	81
1	AMS		WG	17	lb/100 gal	POST	A	
2	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	86
2	AMS		WG	17	lb/100 gal	POST	A	
3	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	77
3	Activator 90		L	0.25	% v/v	POST	A	
3	AMS		WG	17	lb/100 gal	POST	A	
4	Touchdown Total	4.17	SL	24	fl oz/a	POST	A	87
4	AMS		WG	17	lb/100 gal	POST	A	
5	Untreated							0
6	Durango	4	SL	24	fl oz/a	POST	A	83
6	AMS		WG	17	lb/100 gal	POST	A	
7	GF-1280	4	SL	24	fl oz/a	POST	A	80
7	AMS		WG	17	lb/100 gal	POST	A	
8	Makaze	3	SL	32	fl oz/a	POST	A	81
8	AMS		WG	17	lb/100 gal	POST	A	
9	Buccaneer Plus	3	SL	32	fl oz/a	POST	A	82
9	AMS		WG	17	lb/100 gal	POST	A	
10	GlyStar Plus	3	SL	32	fl oz/a	POST	A	80
10	AMS		WG	17	lb/100 gal	POST	A	
11	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	84
11	MF-0019	75	WG	0.06	oz/a	POST	A	
11	AMS		WG	17	lb/100 gal	POST	A	
12	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	80
12	MF-0019	75	WG	0.08	oz/a	POST	A	
12	AMS		WG	17	lb/100 gal	POST	A	
13	Roundup OriginalMax	4.5	SL	22	fl oz/a	POST	A	84
13	MF-0019	75	WG	0.16	oz/a	POST	A	
13	AMS		WG	17	lb/100 gal	POST	A	
LSD (P=.05)								6.2
Standard Deviation								4.3
CV								5.71