

MSU Weed Science Research Program

Evaluation of water quality adjuvants with glyphosate

Trial ID: SOY10-12 Study Dir.: Sprague, Powell
 Conducted: T-14 Campus Investigator: Christy Sprague

Date Planted: May/18/2012 **Row Spacing:** 30 IN
Variety: Pioneer 92Y51 **No. of Reps:** 4
Population: 150,000 seeds/acre **% OM:** 2.8
Soil Type: Loam **pH:** 6.5
Plot Size: 10 X 30 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Spring chisel plow; spring soil finish
Fertilizer: None at planting

Crop and Weed Description

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

Application Description

Application Timing: A
 LPOS
Date Treated: Jun/22/2012
Time Treated: 12:10 PM
% Cloud Cover: 70
Air Temp., Unit: 81 F
% Relative Humidity: 35
Wind Speed/Unit/Dir: 5 mph NE
Soil Temp., Unit: 81 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 5

Crop Stage at Each Application

Crop Name: A
 GLXMA
Height (In.): 8"
Stage (L): V4

Weed Stage at Each Application

Weed 1 Name: A
 ANGR
Height (In.): 5"
Stage (L): 5
Weed 2 Name: CHEAL
Height (In.): 8"
Stage (L): 25
Weed 3 Name: AMAPO
Height (In.): 8"
Stage (L): 20
Weed 4 Name: AMBEL
Height (In.): 7"
Stage (L): 10
Weed 5 Name: ABUTH
Height (In.): 4"
Stage (L): 5

Weed Density (plants/sq. ft.)

1
Date: Jul/09/2012
Weed Name: ANGR
Density: 1
Date: Jul/09/2012
Weed Name: CHEAL
Density: 6
Date: Jul/09/2012
Weed Name: AMAPO
Density: 0
Date: Jul/09/2012
Weed Name: AMBEL
Density: 2
Date: Jul/09/2012
Weed Name: ABUTH
Density: <1

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Appl	Sprayer	Speed	Application Equipment					GPA	Carrier	PSI
			Nozzle	Nozzle	Nozzle	Nozzle	Boom			
A	Type	MPH	Type	Size	Height	Spacing	Width			
	Cub	3.8	AirMix	11002	29"	20"	100"	15	Water	34

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Trial ID: SOY10-12 Study Dir.: Sprague, Powell
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Weed Code	ANGR	CHEAL	AMAPO	AMBEL
Crop Code	GLXMA			
Rating Data Type	injury	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jun/25/2012	Jun/25/2012	Jun/25/2012	Jun/25/2012
Trt-Eval Interval	3 DA-A	3 DA-A	3 DA-A	3 DA-A
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Grow Stg	Appl Code					
1	Untreated						0	0	0	0	0
2	WE1211-1	3	SL	32 fl oz/a	LPOS	A	0	50	43	28	23
	AMS		WG	17 lb/100 gal	LPOS	A					
3	WE1211-1	3	SL	32 fl oz/a	LPOS	A	0	50	38	30	18
	AMS		WG	8.5 lb/100 gal	LPOS	A					
	1002-1 (add last)		L	0.25 % v/v	LPOS	A					
4	WE1211-1	3	SL	32 fl oz/a	LPOS	A	0	50	50	38	25
	1095-1 (add first)		L	4 pt/100 gal	LPOS	A					
5	WE1211-1	3	SL	32 fl oz/a	LPOS	A	0	50	48	43	25
	1095-1 (add first)		L	8 pt/100 gal	LPOS	A					
6	1193-1	3	SL	32 fl oz/a	LPOS	A	0	50	35	40	20
	AMS		WG	17 lb/100 gal	LPOS	A					
7	1193-1	3	SL	32 fl oz/a	LPOS	A	0	53	40	35	20
	AMS		WG	8.5 lb/100 gal	LPOS	A					
	1002-1 (add last)		L	0.25 % v/v	LPOS	A					
8	1193-1	3	SL	32 fl oz/a	LPOS	A	0	50	45	20	20
	1095-1 (add first)		L	4 pt/100 gal	LPOS	A					
9	1193-1	3	SL	32 fl oz/a	LPOS	A	0	50	45	23	20
	1095-1 (add first)		L	8 pt/100 gal	LPOS	A					
LSD (P=.05)							0.0	2.4	13.0	15.6	8.0
CV							0.0	3.73	23.35	37.25	29.15

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO
Crop Code					
Rating Data Type	control	injury	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/25/2012	Jun/29/2012	Jun/29/2012	Jun/29/2012	Jun/29/2012
Trt-Eval Interval	3 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ABUTH	GLXMA	ANGR	CHEAL	AMAPO
1	Untreated							0	0	0	0	0
2	WE1211-1	3	SL	32	fl oz/a	LPOS A		25	0	97	71	99
	AMS		WG	17	lb/100 gal	LPOS A						
3	WE1211-1	3	SL	32	fl oz/a	LPOS A		18	0	99	96	99
	AMS		WG	8.5	lb/100 gal	LPOS A						
	1002-1 (add last)		L	0.25	% v/v	LPOS A						
4	WE1211-1	3	SL	32	fl oz/a	LPOS A		20	0	99	95	99
	1095-1 (add first)		L	4	pt/100 gal	LPOS A						
5	WE1211-1	3	SL	32	fl oz/a	LPOS A		20	0	99	97	98
	1095-1 (add first)		L	8	pt/100 gal	LPOS A						
6	1193-1	3	SL	32	fl oz/a	LPOS A		28	0	99	82	99
	AMS		WG	17	lb/100 gal	LPOS A						
7	1193-1	3	SL	32	fl oz/a	LPOS A		23	0	99	98	99
	AMS		WG	8.5	lb/100 gal	LPOS A						
	1002-1 (add last)		L	0.25	% v/v	LPOS A						
8	1193-1	3	SL	32	fl oz/a	LPOS A		27	0	99	96	99
	1095-1 (add first)		L	4	pt/100 gal	LPOS A						
9	1193-1	3	SL	32	fl oz/a	LPOS A		25	0	99	94	99
	1095-1 (add first)		L	8	pt/100 gal	LPOS A						
LSD (P=.05)								13.6	0.0	2.3	9.2	1.0
CV								45.51	0.0	1.77	7.81	0.76

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	AMBEL	ABUTH	GLXMA	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/29/2012	Jun/29/2012	Jul/02/2012	Jul/02/2012	Jul/02/2012
Trt-Eval Interval	7 DA-A	7 DA-A	10 DA-A	10 DA-A	10 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMBEL	ABUTH	GLXMA	ANGR	CHEAL
1	Untreated							0	0	0	0	0
2	WE1211-1	3	SL	32	fl oz/a	LPOS	A	66	85	0	99	66
	AMS		WG	17	lb/100 gal	LPOS	A					
3	WE1211-1	3	SL	32	fl oz/a	LPOS	A	78	91	0	99	86
	AMS		WG	8.5	lb/100 gal	LPOS	A					
	1002-1 (add last)		L	0.25	% v/v	LPOS	A					
4	WE1211-1	3	SL	32	fl oz/a	LPOS	A	89	84	0	99	94
	1095-1 (add first)		L	4	pt/100 gal	LPOS	A					
5	WE1211-1	3	SL	32	fl oz/a	LPOS	A	80	93	0	99	98
	1095-1 (add first)		L	8	pt/100 gal	LPOS	A					
6	1193-1	3	SL	32	fl oz/a	LPOS	A	79	84	0	99	76
	AMS		WG	17	lb/100 gal	LPOS	A					
7	1193-1	3	SL	32	fl oz/a	LPOS	A	78	93	0	99	96
	AMS		WG	8.5	lb/100 gal	LPOS	A					
	1002-1 (add last)		L	0.25	% v/v	LPOS	A					
8	1193-1	3	SL	32	fl oz/a	LPOS	A	79	84	0	74	89
	1095-1 (add first)		L	4	pt/100 gal	LPOS	A					
9	1193-1	3	SL	32	fl oz/a	LPOS	A	83	88	0	99	98
	1095-1 (add first)		L	8	pt/100 gal	LPOS	A					
LSD (P=.05)								13.6	14.5	0.0	24.1	7.9
CV								13.34	12.69	0.0	19.35	6.92

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	AMAPO	AMBEL	ABUTH	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jul/02/2012	Jul/02/2012	Jul/02/2012	Jul/20/2012	Jul/20/2012
Trt-Eval Interval	10 DA-A	10 DA-A	10 DA-A	28 DA-A	28 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	AMBEL	ABUTH	ANGR	CHEAL
1	Untreated							0	0	0	0	0
2	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	66	99	99	88
	AMS		WG	17	lb/100 gal	LPOS	A					
3	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	79	98	99	95
	AMS		WG	8.5	lb/100 gal	LPOS	A					
	1002-1 (add last)		L	0.25	% v/v	LPOS	A					
4	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	87	92	99	99
	1095-1 (add first)		L	4	pt/100 gal	LPOS	A					
5	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	78	86	99	99
	1095-1 (add first)		L	8	pt/100 gal	LPOS	A					
6	1193-1	3	SL	32	fl oz/a	LPOS	A	99	81	97	99	95
	AMS		WG	17	lb/100 gal	LPOS	A					
7	1193-1	3	SL	32	fl oz/a	LPOS	A	99	92	99	99	99
	AMS		WG	8.5	lb/100 gal	LPOS	A					
	1002-1 (add last)		L	0.25	% v/v	LPOS	A					
8	1193-1	3	SL	32	fl oz/a	LPOS	A	99	83	93	99	96
	1095-1 (add first)		L	4	pt/100 gal	LPOS	A					
9	1193-1	3	SL	32	fl oz/a	LPOS	A	99	88	98	99	99
	1095-1 (add first)		L	8	pt/100 gal	LPOS	A					
LSD (P=.05)								0.0	13.2	11.6	0.0	5.0
CV								0.0	12.5	9.43	0.0	4.05

Means followed by same letter do not significantly differ (P=.05, LSD)

MSU Weed Science Research Program

Weed Code	AMAPO	AMBEL	ABUTH
Crop Code			
Rating Data Type	control	control	control
Rating Unit	percent	percent	percent
Rating Date	Jul/20/2012	Jul/20/2012	Jul/20/2012
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A
# Subsamples, Dec.	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	AMAPO	AMBEL	ABUTH
1	Untreated							0	0	0
2	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	86	99
	AMS		WG	17	lb/100 gal	LPOS	A			
3	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	85	97
	AMS		WG	8.5	lb/100 gal	LPOS	A			
	1002-1 (add last)		L	0.25	% v/v	LPOS	A			
4	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	97	98
	1095-1 (add first)		L	4	pt/100 gal	LPOS	A			
5	WE1211-1	3	SL	32	fl oz/a	LPOS	A	99	92	97
	1095-1 (add first)		L	8	pt/100 gal	LPOS	A			
6	1193-1	3	SL	32	fl oz/a	LPOS	A	99	87	99
	AMS		WG	17	lb/100 gal	LPOS	A			
7	1193-1	3	SL	32	fl oz/a	LPOS	A	99	96	99
	AMS		WG	8.5	lb/100 gal	LPOS	A			
	1002-1 (add last)		L	0.25	% v/v	LPOS	A			
8	1193-1	3	SL	32	fl oz/a	LPOS	A	99	93	99
	1095-1 (add first)		L	4	pt/100 gal	LPOS	A			
9	1193-1	3	SL	32	fl oz/a	LPOS	A	99	93	99
	1095-1 (add first)		L	8	pt/100 gal	LPOS	A			
LSD (P=.05)								0.0	9.4	2.9
CV								0.0	8.0	2.25

Means followed by same letter do not significantly differ (P=.05, LSD)