

MSU Weed Science Research Program

Evaluation of water conditioning agents (WECO)

Trial ID: SOY17-10 Study Dir.: Sprague, Powell
Conducted: H6-8 Soils Investigator: Christy Sprague

Date Planted: 6/17/2010 Row Spacing: 30 IN
Variety: Pioneer 92M61 No. of Reps: 4
Population: 156,000 seeds/acre % OM: 2.9
Soil Type: Loam pH: 6.8
Plot Size: 10 X 25 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Spring chisel plow and spring soil finish
Fertilizer: None

Crop and Weed Description

Table with 4 columns: Weed, Code, Common Name, Scientific Name. Rows include CHEAL (LAMBSQUARTERS), AMASS (REDROOT PIGWEED), POROL (PURSLANE), and GLXMA (SOYBEAN).

Application Description

A

Application Timing: POST
Date Treated: 7/12/2010
Time Treated: 1:45 pm
% Cloud Cover: 70
Air Temp., Unit: 84 F
% Relative Humidity: 60
Wind Speed/Unit/Dir: 3 mph E
Soil Temp., Unit: 82 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 4

Crop Stage at Each Application

A

Crop Name: GLXMA
Height (In.): 8-9"
Stage (L): V3-4

Weed Stage at Each Application

A

Weed 1 Name: CHEAL
Height (In.): 3-4"
Stage (L): 12-16
Weed 2 Name: AMASS
Height (In.): 2-4"
Stage (L): 6-8
Weed 3 Name: POROL
Height (In.): 3" dia.
Stage (L): -

Weed Density (plants/sq. ft.)

Table with 3 columns: Weed Name, Density. Rows for AMASS, CHEAL, and POROL.

Application Equipment

Table with 11 columns: Appl, Sprayer, Speed, Nozzle, Nozzle, Nozzle, Nozzle, Boom, Width, GPA, Carrier, PSI. Row A shows a Cub sprayer with 3.8 MPH speed and 26" nozzle.

Comments: Treatment 1-6,9,10 were applied at 10 GPA with 32 PSI with AIXR 11015 nozzles. Additives in treatments 7 and 8 did not result in a good spray pattern at 10 GPA. These treatments were applied at 20 GPA at 30 PSI with Greenleaf AirMix 11003 nozzles.

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							GLXMA	CHEAL	AMASS	POROL	GLXMA	CHEAL
							injury	control	control	control	injury	control
							percent	percent	percent	percent	percent	percent
							7/20/2010	7/20/2010	7/20/2010	7/20/2010	7/26/2010	7/26/2010
							8 DA-A	8 DA-A	8 DA-A	8 DA-A	14 DA-A	14 DA-A
							0	0	0	0	0	0
Trt	Treatment	Form	Rate	Unit	Grow	Appl						
No.	Name	Type			Stg	Code						
1	1189-1	L	3	pt/100 gal	POST	A	0	81	75	63	0	95
1	1193-1	L	4	fl oz/a	POST	A						
1	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
2	1189-1	L	3	pt/100 gal	POST	A	0	74	78	60	0	81
2	1211-1	L	4	fl oz/a	POST	A						
2	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
3	1095-1	L	3	pt/100 gal	POST	A	0	81	80	68	0	90
3	1193-1	L	4	fl oz/a	POST	A						
3	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
4	1095-1	L	3	pt/100 gal	POST	A	0	79	69	71	0	90
4	1211-1	L	4	fl oz/a	POST	A						
4	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
5	1186-1	L	3	qt/100 gal	POST	A	0	78	87	53	0	89
5	1193-1	L	4	fl oz/a	POST	A						
5	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
6	1186-1	L	3	qt/100 gal	POST	A	0	79	75	56	0	94
6	1211-1	L	4	fl oz/a	POST	A						
6	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
7	1185-1	DF	10	lb/100 gal	POST	A	0	60	79	33	0	80
7	1193-1	L	4	fl oz/a	POST	A						
7	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
8	1185-1	DF	10	lb/100 gal	POST	A	0	55	76	28	0	81
8	1211-1	L	4	fl oz/a	POST	A						
8	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
9	1222-1	L	1	qt/100 gal	POST	A	0	59	63	28	0	93
9	1193-1	L	4	fl oz/a	POST	A						
9	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
10	1222-1	L	1	qt/100 gal	POST	A	0	63	60	51	0	89
10	1211-1	L	4	fl oz/a	POST	A						
10	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
11	Untreated						0	0	0	0	0	0
LSD (P=.05)							0.0	10.2	11.6	28.7	0.0	15.1
Standard Deviation							0.0	7.1	8.0	19.9	0.0	10.5
CV							0.0	11.03	11.91	43.0	0.0	13.06

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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							AMASS	POROL	CHEAL	AMASS	POROL	
Weed Code												
Crop Code												
Rating Data Type							control	control	control	control	control	
Rating Unit							percent	percent	percent	percent	percent	
Rating Date							7/26/2010	7/26/2010	8/9/2010	8/9/2010	8/9/2010	
Trt-Eval Interval							14 DA-A	14 DA-A	28 DA-A	28 DA-A	28 DA-A	
# Subsamples, Dec.							0	0	0	0	0	
Trt	Treatment	Form	Rate	Unit	Grow	Appl						
No.	Name	Type			Stg	Code						
1	1189-1	L	3	pt/100 gal	POST	A	89	79	96	99	84	
1	1193-1	L	4	fl oz/a	POST	A						
1	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
2	1189-1	L	3	pt/100 gal	POST	A	83	80	93	95	85	
2	1211-1	L	4	fl oz/a	POST	A						
2	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
3	1095-1	L	3	pt/100 gal	POST	A	96	80	96	98	90	
3	1193-1	L	4	fl oz/a	POST	A						
3	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
4	1095-1	L	3	pt/100 gal	POST	A	86	93	98	96	90	
4	1211-1	L	4	fl oz/a	POST	A						
4	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
5	1186-1	L	3	qt/100 gal	POST	A	96	67	95	99	76	
5	1193-1	L	4	fl oz/a	POST	A						
5	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
6	1186-1	L	3	qt/100 gal	POST	A	88	82	98	98	77	
6	1211-1	L	4	fl oz/a	POST	A						
6	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
7	1185-1	DF	10	lb/100 gal	POST	A	98	33	75	99	58	
7	1193-1	L	4	fl oz/a	POST	A						
7	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
8	1185-1	DF	10	lb/100 gal	POST	A	97	33	69	99	43	
8	1211-1	L	4	fl oz/a	POST	A						
8	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
9	1222-1	L	1	qt/100 gal	POST	A	85	40	81	95	63	
9	1193-1	L	4	fl oz/a	POST	A						
9	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
10	1222-1	L	1	qt/100 gal	POST	A	90	60	89	98	76	
10	1211-1	L	4	fl oz/a	POST	A						
10	CA carbonate (1000 ppm)	WG	139.3	g/a	POST	A						
11	Untreated						0	0	0	0	0	
LSD (P=.05)							9.8	31.6	13.7	3.6	14.8	
Standard Deviation							6.8	21.9	9.5	2.5	10.2	
CV							8.26	37.35	11.76	2.79	15.24	

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.