

MSU Weed Science Research Program

Postemergence control of glyphosate-resistant Palmer amaranth

Trial ID: SOY21-13 Study Dir.: Powell, Sprague, Powell
 Conducted: St. Joseph Co. Investigator: Christy Sprague

Date Planted: May/17/2013 **Row Spacing:** 30 IN
Variety: DF9251LL **No. of Reps:** 4
Population: 150,000 seeds/A **% OM:** 2.4
Soil Type: Sandy loam **pH:** 6.8
Plot Size: 10 X 25 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall chisel; spring soil finish
Fertilizer: None

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	AMAPA	AMARANTH, PALMER	AMARANTHUS PALMERI S.WATS.
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C
Application Timing:	PRE	3-inch	6-inch
Date Treated:	May/17/2013	Jun/19/2013	Jun/24/2013
Time Treated:	12:30 AM	9:30 AM	11:00 AM
% Cloud Cover:	100	0	90
Air Temp., Unit:	81 F	72 F	78 F
% Relative Humidity:	32	42	72
Wind Speed/Unit/Dir:	4 mph E	4 mph SE	6 mph W
Soil Temp., Unit:	71 F	67 F	77 F
Soil/Leaf Surface M:	4 -	5 5	5 5
Soil Moist (1=w 5=d):	4	4	4

Crop Stage at Each Application

	A	B	C
Crop Name:	GLXMA	GLXMA	GLXMA
Height (In.):	-	7	10
Stage (L):	-	V3	V4

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	AMAPA	AMAPA	AMAPA
Height (In.):	-	1-5(3)"	1-10(6)"
Stage (L):	-	4-20(12)	4-40(20)

Weed Density (plants/sq. ft.)

	1
Date:	Jun/14/2013
Weed Name:	AMAPA
Density:	1

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom width	GPA	Carrier	PSI
A	Backpack	3.8	AIXR	11003	22"	20"	120"	19	water	30
B	Backpack	3.8	AIXR	11003	26"	20"	120"	19	water	30
C	Backpack	3.8	AIXR	11003	26"	20"	120"	19	water	30

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Trial ID: SOY21-13 Study Dir.: Powell, Sprague, Powell
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Weed Code	AMAPA	AMAPA
Crop Code	GLXMA	GLXMA
Rating Data Type	injury	injury
Rating Unit	percent	percent
Rating Date	percent	percent
Trt-Eval Interval	7 DA-B	9 DA-C
# Subsamples, Dec.	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	0	86	11	97	0
1	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	0	0	0	0	0
2	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	31	86	9	97	0
	Cobra	2	L	8	fl oz/a	3-inch	B					
	COC		L	0.5	% v/v	3-inch	B					
	AMS		WG	8.5	lb/100 gal	3-inch	B					
3	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	35	86	11	98	0
	Cobra	2	L	12.5	fl oz/a	3-inch	B					
	COC		L	0.5	% v/v	3-inch	B					
	AMS		WG	8.5	lb/100 gal	3-inch	B					
4	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	24	97	7	99	0
	Flexstar	1.88	L	1	pt/a	3-inch	B					
	COC		L	1	% v/v	3-inch	B					
	AMS		WG	8.5	lb/100 gal	3-inch	B					
5	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	5	98	0	97	0
	Liberty	2.34	L	22	oz/a	3-inch	B					
	AMS		WG	8.5	lb/100 gal	3-inch	B					
6	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	5	97	0	98	0
	Liberty	2.34	L	29	oz/a	3-inch	B					
	AMS		WG	8.5	lb/100 gal	3-inch	B					
7	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	5	97	0	98	0
	Liberty	2.34	L	36	oz/a	3-inch	B					
	AMS		WG	8.5	lb/100 gal	3-inch	B					
8	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A			25	93	5
	Cobra	2	L	12.5	fl oz/a	6-inch	C					
	COC		L	0.5	% v/v	6-inch	C					
	AMS		WG	8.5	lb/100 gal	6-inch	C					
9	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A			15	96	5
	Flexstar	1.88	L	1	pt/a	6-inch	C					
	COC		L	1	% v/v	6-inch	C					
	AMS		WG	8.5	lb/100 gal	6-inch	C					
10	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A			0	90	0
	Liberty	2.34	L	22	oz/a	6-inch	C					
	AMS		WG	8.5	lb/100 gal	6-inch	C					
11	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A			0	94	0
	Liberty	2.34	L	29	oz/a	6-inch	C					
	AMS		WG	8.5	lb/100 gal	6-inch	C					
12	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A			0	96	0
	Liberty	2.34	L	36	oz/a	6-inch	C					
	AMS		WG	8.5	lb/100 gal	6-inch	C					
LSD (P=.05)								1.8	4.3	0.9	3.0	0.0
CV								7.99	3.65	10.8	2.36	0.0

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

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Weed Code	AMAPA		AMAPA
Crop Code		GLXMA	
Rating Data Type	control	injury	control
Rating Unit	percent	percent	percent
Rating Date	Jul/10/2013	Jul/15/2013	Jul/15/2013
Trt-Eval Interval	16 DA-C	21 DA-C	21 DA-C
# Subsamples, Dec.	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code			
1	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	0	0	0
2	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	97	0	85
	Cobra	2	L	8	fl oz/a	3-inch	B			
	COC		L	0.5	% v/v	3-inch	B			
	AMS		WG	8.5	lb/100 gal	3-inch	B			
3	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	96	0	91
	Cobra	2	L	12.5	fl oz/a	3-inch	B			
	COC		L	0.5	% v/v	3-inch	B			
	AMS		WG	8.5	lb/100 gal	3-inch	B			
4	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	97	0	95
	Flexstar	1.88	L	1	pt/a	3-inch	B			
	COC		L	1	% v/v	3-inch	B			
	AMS		WG	8.5	lb/100 gal	3-inch	B			
5	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	95	0	91
	Liberty	2.34	L	22	oz/a	3-inch	B			
	AMS		WG	8.5	lb/100 gal	3-inch	B			
6	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	97	0	92
	Liberty	2.34	L	29	oz/a	3-inch	B			
	AMS		WG	8.5	lb/100 gal	3-inch	B			
7	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	96	0	90
	Liberty	2.34	L	36	oz/a	3-inch	B			
	AMS		WG	8.5	lb/100 gal	3-inch	B			
8	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	91	0	88
	Cobra	2	L	12.5	fl oz/a	6-inch	C			
	COC		L	0.5	% v/v	6-inch	C			
	AMS		WG	8.5	lb/100 gal	6-inch	C			
9	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	95	0	96
	Flexstar	1.88	L	1	pt/a	6-inch	C			
	COC		L	1	% v/v	6-inch	C			
	AMS		WG	8.5	lb/100 gal	6-inch	C			
10	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	90	0	86
	Liberty	2.34	L	22	oz/a	6-inch	C			
	AMS		WG	8.5	lb/100 gal	6-inch	C			
11	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	94	0	93
	Liberty	2.34	L	29	oz/a	6-inch	C			
	AMS		WG	8.5	lb/100 gal	6-inch	C			
12	Dual II Magnum	7.64	L	1.0	pt/a	PRE	A	94	0	93
	Liberty	2.34	L	36	oz/a	6-inch	C			
	AMS		WG	8.5	lb/100 gal	6-inch	C			
LSD (P=.05)								3.1	0.0	5.2
CV								2.5	0.0	4.35

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