

MSU Weed Science Research Program

Postemergence options for control of multiple-resistant Palmer amaranth

Trial ID: C14-14 Study Dir.: Kohrt, Sprague, and Powell
 Conducted: Barry County Investigator: Christy Sprague

Date Planted: May/19/2014 Row Spacing: 30 IN
 Variety: DKC 5204 No. of Reps: 4
 Population: 30,000 seeds/A % OM: 2.5
 Soil Type: Sandy loam pH: 6.5
 Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Spring vertical tillage.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	AMAPA	AMARANTH, PALMER	AMARANTHUS PALMERI S.WATS.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

A
 Application Timing: POST
 Date Treated: Jun/09/2014
 Time Treated: 12:30 pm
 % Cloud Cover: 10
 Air Temp., Unit: 76 F
 % Relative Humidity: 50
 Wind Speed/Unit/Dir: 2 mph S
 Soil Temp., Unit: 79 F
 Soil/Leaf Surface M: 5 5
 Soil Moist (1=w 5=d): 5

Crop Stage at Each Application

A
 Crop Name: ZEAMX
 Height (In.): 12"
 Stage (L): V4

Weed Stage at Each Application

A
 Weed 1 Name: AMAPA
 Height (In.): 3"
 Stage (L): 6

Weed Density (plants/sq. ft.)

1
 Date: Jul/09/2014
 Weed Name: AMAPA
 Density: 4

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Backpack	3.8	AIXR	11003	24"	20"	100"	19	water	30

Comments: This population of Palmer amaranth is resistant to Site of Action Groups 2, 5, and 9.

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Weed Code								AMAPA		AMAPA	
Crop Code								ZEAMX		ZEAMX	
Rating Data Type								injury		injury	
Rating Unit								percent		percent	
Rating Date								Jun/16/2014		Jun/26/2014	
Trt-Eval Interval								7 DA-A		17 DA-A	
# Subsamples, Dec.								0		0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	2,4-D Amine	4	L	1	pt/a	3-inch	A	0	62	0	68
2	Status	56	WG	5	oz/a	3-inch	A	2	74	3	94
2	Surfactant		L	0.25	% v/v	3-inch	A				
2	AMS		WG	17	lb/100 gal	3-inch	A				
3	Clarity	4	L	1	pt/a	3-inch	A	6	69	4	91
4	AAtrex	4	L	1	pt/a	3-inch	A	0	69	0	73
4	COC		L	1	% v/v	3-inch	A				
5	AAtrex	4	L	1	qt/a	3-inch	A	0	70	0	78
5	COC		L	1	% v/v	3-inch	A				
6	Cadet	0.91	L	0.9	fl oz/a	3-inch	A	8	93	6	97
6	COC		L	1	% v/v	3-inch	A				
7	Liberty	2.34	L	29	fl oz/a	3-inch	A		96		95
7	AMS		WG	17	lb/100 gal	3-inch	A				
8	Roundup PowerMax	4.5	L	22	fl oz/a	3-inch	A	0	68	0	71
8	AMS		WG	17	lb/100 gal	3-inch	A				
9	Armezon	2.8	L	0.75	fl oz/a	3-inch	A	0	78	0	96
9	MSO		L	1	% v/v	3-inch	A				
9	AMS		WG	17	lb/100 gal	3-inch	A				
10	Untreated							0	0	0	0
LSD (P=.05)								2.0	12.3	1.9	6.8
CV								73.37	12.46	99.48	6.13

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