

MSU Weed Science Research Program

Postemergence control of glyphosate-resistant Palmer amaranth in corn

Trial ID: C17-13 Study Dir.: Kohrt, Sprague, Powell
Conducted: Barry Co. Investigator: Christy Sprague

Date Planted: May/16/2013 Row Spacing: 30 IN
Variety: DKC 49-94 No. of Reps: 4
Population: 27,500 seeds/A % OM: 2.2
Soil Type: Sandy loam pH: 6.9
Plot Size: 10 X 30 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Spring soil finish

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/14/2013
Time Treated: 3:00 PM
% Cloud Cover: 50
Air Temp., Unit: 73 F
% Relative Humidity: 45
Wind Speed/Unit/Dir: 4 mph NE
Soil Temp., Unit: 78 F
Soil/Leaf Surface M: 3 4
Soil Moist (1=w 5=d): 3

Crop Stage at Each Application

A
Crop Name: ZEAMX
Height (In.): 12"
Stage (L): V5

Weed Stage at Each Application

A
Weed 1 Name: AMAPA
Height (In.): 4"
Stage (L): 6

Weed Density (plants/sq. ft.)

1
Weed Name: AMAPA
Density: 45

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Backpack	3.5	AIXR	11003	20"	20"	100"	19	water	30

Comments: This population of Palmer amaranth was resistant to glyphosate and ALS-inhibiting herbicides.

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Weed Code	AMAPA	AMAPA
Crop Code	ZEMAX	ZEMAX
Rating Data Type	control	control
Rating Unit	percent	percent
Rating Date	Jun/21/2013	Jun/28/2013
Trt-Eval Interval	7 DA-A	14 DA-A
# Subsamples, Dec.	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code		
1	2,4-D Amine	4	L	1	pt/a	3-inch	A	61	30
2	Status	56	WG	5	oz/a	3-inch	A	63	64
	Surfactant		L	0.25	% v/v	3-inch	A		
	AMS		WG	17	lb/100 gal	3-inch	A		
3	Clarity	4	L	1	pt/a	3-inch	A	64	55
4	AAtrex	4	L	1	pt/a	3-inch	A	28	15
	COC		L	1	% v/v	3-inch	A		
5	AAtrex	4	L	1	qt/a	3-inch	A	70	26
	COC		L	1	% v/v	3-inch	A		
6	Cadet	0.91	L	0.9	fl oz/a	3-inch	A	28	28
	COC		L	1	% v/v	3-inch	A		
7	Liberty	2.34	L	29	fl oz/a	3-inch	A	90	23
	AMS		WG	17	lb/100 gal	3-inch	A		
8	Roundup PowerMax	4.5	L	22	fl oz/a	3-inch	A	0	8
	AMS		WG	17	lb/100 gal	3-inch	A		
9	Armezon	2.8	L	0.75	fl oz/a	3-inch	A	81	88
	MSO		L	1	% v/v	3-inch	A		
	AMS		WG	17	lb/100 gal	3-inch	A		
10	Untreated							0	0
LSD (P=.05)								11.2	18.5
CV								15.91	38.07

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