

Evaluation of Palmer Amaranth Control with Various Modes of Action - Noncrop.

Trial ID: 14-9B-N210 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Status: F one-year/final Initiation Date: 6-19-14 Completion Date: 9-5-14		Trial Location
City: Belleville	Country: USA	
State/Prov.: Illinois IL		
Postal Code: 62221		

Objectives: Compare control of Palmer Amaranth with different modes of action on a Palmer population.

Study Director: Ronald F. Krausz Organization: Belleville Research Center - Southern Illinois Univ Carbondale Address: 2036 Charles Lane City+State/Prov: Belleville, IL Postal Code: 62221 Country: USA	Contacts Title: Researcher/Farm Manager Phone No.: 618-566-4761 E-mail: rkrausz@siu.edu
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Crop 1: NONE - Non-crop _ Variety: NON-CROP Description: NA	Crop Description Planting Method: NA
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Pest 1 Type: W Code: AMAPA Amaranthus palmeri S.Wats. Common Name: amaran h, Palmer	Pest Description
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Treated Plot Width: 10 FT Total Plot Width: 10 FT Treated Plot Length: 25 FT Total Plot Length: 25 FT Replications: 4 Untreated Arrangement: INCLUDED single control randomized in each block	Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: REDTIL reduced-till Study Design: RACOB L Randomized Complete Block (RCB)
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No.	Previous Crop	Year
1.	GLXMA	2013

Maintenance <table border="1"> <thead> <tr> <th>No.</th> <th>Maintenance Product Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A</td> </tr> </tbody> </table>	No.	Maintenance Product Name	1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A
No.	Maintenance Product Name			
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A			

% OM: 2.9 Texture: SIL silt loam pH: 6.2 Soil Name: Be halto CEC: 11	Soil Description
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Additional Measured Elements		
Element	Quantity	Unit
P1	72	lb/A
K	275	lb/A

Overall Moisture Conditions: NORMAL Closest Weather Station: ICN - Belleville IL	Moisture and Weather Conditions Distance, Unit: 0.5 MI
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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-1-14	0.13	IN	RAIN	rain	1	DAY			
2.	6-3-14					7	DAY	59	90	F
3.	6-4-14	0.67	IN	RAIN	rain	1	DAY			
4.	6-7-14	0.6	IN	RAIN	rain	1	DAY			
5.	6-9-14	1.38	IN	RAIN	rain	2	DAY			
6.	6-10-14					7	DAY	51	90	F
7.	6-12-14	0.07	IN	RAIN	rain	1	DAY			
8.	6-15-14	0.02	IN	RAIN	rain	1	DAY			
9.	6-17-14					7	DAY	67	92	F
10.	6-20-14	2.09	IN	RAIN	rain	5	DAY			
11.	6-24-14					7	DAY	65	91	F
12.	6-27-14	0.11	IN	RAIN	rain	2	DAY			
13.	7-1-14	0.01	IN	RAIN	rain	1	DAY			
14.	7-1-14					7	DAY	55	90	F
15.	7-7-14	0.79	IN	RAIN	rain	2	DAY			
16.	7-8-14					7	DAY	59	89	F
17.	7-12-14	0.49	IN	RAIN	rain	3	DAY			
18.	7-15-14					7	DAY	54	85	F
19.	7-22-14					7	DAY	57	98	F
20.	7-25-14	0.02	IN	RAIN	rain	1	DAY			
21.	7-29-14					7	DAY	52	89	F
22.	8-1-14	0.04	IN	RAIN	rain	1	DAY			
23.	8-5-14	4.04	IN	RAIN	rain	4	DAY			
24.	8-5-14					7	DAY	66	88	F
25.	8-12-14					7	DAY	57	84	F
26.	8-15-14	1.21	IN	RAIN	rain	3	DAY			
27.	8-19-14					7	DAY	67	95	F
28.	8-20-14	0.11	IN	RAIN	rain	1	DAY			
29.	8-26-14					7	DAY	68	95	F
30.	8-27-14	1.56	IN	RAIN	rain	2	DAY			
31.	9-1-14	2.21	IN	RAIN	rain	2	DAY			
32.	9-2-14					7	DAY	54	93	F
33.	9-5-14	0.24	IN	RAIN	rain	1	DAY			
34.	9-9-14					7	DAY	45	85	F
35.	9-10-14	1.06	IN	RAIN	rain	1	DAY			
36.	9-16-14					7	DAY	46	86	F
37.	9-23-14					7	DAY	46	86	F
38.	9-30-14					7	DAY	37	87	F

Application Description

	A	B	C
Application Date:	6-19-14	6-19-14	7-11-14
Appl. Start Time:	15:00	15:00	10:00
Appl. Stop Time:	15:30	15:30	10:30
Application Method:	Spray	Spray	Spray
Application Timing:	PPI	PRE	4"W
Application Placement:	BROSOI	BROSOI	BROSOI
Applied By:	RJW	RJW	RJW
Air Temperature, Unit:	92 F	92 F	81 F
% Relative Humidity:	49	49	60
Wind Velocity, Unit:	6 MPH	6 MPH	2 MPH
Wind Direction:	S	S	S
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	77 F	77 F	75 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	25	25	0
Next Moisture Occurred On:	6-20-14	6-20-14	7-13-14
Time to Next Moisture, Unit:	1 DAY	1 DAY	2 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	NONE	NONE	NONE
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA

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Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	NA	NA	10
Stage Minimum, Percent:			6
Stage Maximum, Percent:			20
Height, Unit:			6 IN
Height Minimum, Maximum:			2 8
Density, Unit:			4 FT2

Application Equipment			
	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Incorporation Equip.:	CULFIE		
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMAPA	AMAPA	AMAPA
								Control Percent	Control Percen	Control Percen
								14 DAT	28 DAT	56 DAT
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Other Rate	Other Rate	Growth Unit	Appl Stage	Code
1	NONTREATED									
2	AATREX 4L	4	SC	2 lb ai/a		2 qt/a		PRE	B	
3	CALLISTO	4	SC	0.188 lb ai/a		6 fl oz/a		PRE	B	
4	BALANCE PRO	4	SC	0.063 lb ai/a		2 fl oz/a		PRE	B	
5	SCEPTER	70	WG	0.125 lb ai/a		2.86 oz/a		PRE	B	
6	CLASSIC	25	WG	0.04 lb ai/a		2.56 oz/a		PRE	B	
7	TREFLAN	4	EC	1 lb ai/a		2 pt/a		PPI	A	
8	PROWL H2O	3.8	CS	0.95 lb ai/a		2 pt/a		PRE	B	
9	REFLEX	2	EC	0.296 lb ai/a		19 fl oz/a		PRE	B	
10	DUAL MAGNUM	7.62	EC	1.27 lb ai/a		1.33 pt/a		PRE	B	
11	ANTHEM	2.15	SE	0.134 lb ai/a		8 fl oz/a		PRE	B	
12	ZIDUA	85	WG	0.133 lb ai/a		2.5 oz/a		PRE	B	
13	SPARTAN 4F	4	SC	0.25 lb ai/a		8 fl oz/a		PRE	B	
14	VALOR SX	51	WG	0.063 lb ai/a		2 oz/a		PRE	B	
15	WARRANT	3	CS	1.13 lb ai/a		48 fl oz/a		PRE	B	
16	PURSUIT	2	SL	0.063 lb ai/a		4 fl oz/a		PRE	B	
17	SHARPEN	2.85	SC	0.022 lb ai/a		1 fl oz/a		PRE	B	
18	COBRA COC (PRIME OIL) N-PAK AMS	2 100 100	EC SL SL	0.19 lb ai/a 1 % v/v 2.5 % v/v		12 fl oz/a 1 % v/v 2.5 % v/v		4"W 4"W 4"W	C C C	
19	CALLISTO COC (PRIME OIL) N-PAK AMS	4 100 100	SC SL SL	0.094 lb ai/a 1 % v/v 2.5 % v/v		3 fl oz/a 1 % v/v 2.5 % v/v		4"W 4"W 4"W	C C C	
20	PURSUIT MSO (MSO ULTRA) N-PAK AMS	2 100 100	SL SL SL	0.063 lb ai/a 1 % v/v 2.5 % v/v		4 fl oz/a 1 % v/v 2.5 % v/v		4"W 4"W 4"W	C C C	
21	CLARITY	4	SL	0.56 lb ae/a		18 fl oz/a		4"W	C	
LSD (P=.05)								5.6	13.1	17.0
Standard Deviation								3.5	9.2	12.0
CV								3.8	10.59	14.63
Replicate F								0.905	2.821	5.007
Replicate Prob(F)								0.4758	0.0464	0.0036
Treatment F								9.176	22.919	17.286
Treatment Prob(F)								0.0042	0.0001	0.0001

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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Trial Comments

1. Protocol: SIU.
2. Ratings: WC 14, 28, and 56 DA-A, and WC 14, 28, and 56 DA-B.
3. No Yield (non-crop).
4. Blanket POST application of Select Max (1 pt/A) plus COC (1%)
to be applied to 2 inch grass as needed.
5. Ratings at 14 DA-A, 14 DA-B, and 14 DA-C were on 7-3-14, 7-3-14, and 7-25-14, respectively.
Ratings at 28 DA-A, 28 DA-B, and 28 DA-C were on 7-17-14, 7-17-14, and 8-8-14, respectively.
Ratings at 56 DA-A, 56 DA-B, and 56 DA-C were on 8-14-14, 8-14-14, and 9-5-14, respectively.
6. Not possible to rate weed control at 14 DA-A and 14 DA-B because no new weeds had emerged.
7. Not harvested, non-crop.