Herbicide Response Screen of POST Applications - Non-Crop.

Trial ID: 14-COL-POSTscreen-M70 Location: Belleville Res. Center Trial Year: 2014
Investigator: Ronald F. Krausz

Trial Status: F one-year/final
Initiation Date: 6-3-14
Completion Date: 8-20-14

Trial Location

City: Collinsville **Country:** USA
State/Prov.: Illinois IL
Postal Code: 62234

Objectives:
Evaluate the efficacy of ALS, triazine, HPPD, and growth regulator herbicdes on Palmer amaranth control.

Contacts

Study Director: Ronald F. Krausz **Title:** Researcher/Farm Manager
Organization: Belleville Research Center - Southern Illinois Univ Carbondale
Address: 2036 Charles Lane **Phone No.:** 618-566-4761
City+State/Prov: Belleville, IL
Postal Code: 62221 **E-mail:** rkrausz@siu.edu
Country: USA

Crop Description

Crop 1: NONE - Non-crop _
Variety: NON-CROP
Planting Method: NA

Pest Description

Pest 1 Type: W **Code:** AMAPA Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaran h

Site and Design

Treated Plot Width: 6.67 FT **Total Plot Width:** 10 FT **Site Type:** FIELD
Treated Plot Length: 25 FT **Total Plot Length:** 25 FT **Experimental Unit:** 1 PLOT
Tillage Type: REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	GLXMA	2013

Maintenance

No.	Maintenance Product Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 14 **% OM:** 2.8 **Texture:** SIL silt loam
% Silt: 70 **pH:** 7.07 **Soil Name:** Littleton/Haymond/Orion
% Clay: 16 **CEC:** 11.2

Additional Measured Elements

Element	Quantity	Unit
P1	63	lb/A
K	346	lb/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL
Closest Weather Station: WatchDog on-site **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.	5-6-14					7	DAY	56	86	F
2.	5-8-14	0.13	IN	RAIN	rain	2	DAY			
3.	5-12-14	0.88	IN	RAIN	rain	4	DAY			
4.	5-13-14					7	DAY	37	76	F
5.	5-20-14					7	DAY	55	87	F
6.	5-21-14	0.06	IN	RAIN	rain	1	DAY			
7.	5-25-14	0.49	IN	RAIN	rain	2	DAY			
8.	5-27-14	0.08	IN	RAIN	rain	2	DAY			
9.	5-27-14					7	DAY	60	86	F
10.	5-31-14	0.14	IN	RAIN	rain	1	DAY			
11.	6-2-14	0.27	IN	RAIN	rain	1	DAY			
12.	6-3-14					7	DAY	62	91	F
13.	6-4-14	1.46	IN	RAIN	rain	1	DAY			
14.	6-7-14	0.22	IN	RAIN	rain	1	DAY			
15.	6-8-14	0.01	IN	RAIN	rain	1	DAY			
16.	6-9-14	0.6	IN	RAIN	rain	1	DAY			
17.	6-10-14	0.79	IN	RAIN	rain	1	DAY			
18.	6-10-14					7	DAY	54	90	F
19.	6-12-14	0.3	IN	RAIN	rain	1	DAY			
20.	6-13-14	0.01	IN	RAIN	rain	1	DAY			
21.	6-16-14	0.01	IN	RAIN	rain	1	DAY			
22.	6-17-14					7	DAY	67	94	F
23.	6-20-14	0.01	IN	RAIN	rain	1	DAY			
24.	6-21-14	0.39	IN	RAIN	rain	1	DAY			
25.	6-22-14	0.09	IN	RAIN	rain	1	DAY			
26.	6-23-14	0.02	IN	RAIN	rain	1	DAY			
27.	6-24-14	0.08	IN	RAIN	rain	1	DAY			
28.	6-24-14					7	DAY	67	92	F
29.	6-27-14	0.02	IN	RAIN	rain	1	DAY			
30.	7-1-14					7	DAY	56	92	F
31.	7-3-14	0.02	IN	RAIN	rain	1	DAY			
32.	7-7-14	0.03	IN	RAIN	rain	1	DAY			
33.	7-8-14	0.48	IN	RAIN	rain	1	DAY			
34.	7-8-14					7	DAY	59	95	F
35.	7-13-14	0.23	IN	RAIN	rain	1	DAY			
36.	7-14-14	0.2	IN	RAIN	rain	1	DAY			
37.	7-15-14	0.01	IN	RAIN	rain	1	DAY			
38.	7-15-14					7	DAY	54	90	F
39.	7-22-14					7	DAY	55	100	F
40.	7-25-14	0.03	IN	RAIN	rain	1	DAY			
41.	7-29-14					7	DAY	51	93	F
42.	8-5-14	0.33	IN	RAIN	rain	1	DAY			
43.	8-5-14					7	DAY	67	90	F
44.	8-6-14	0.08	IN	RAIN	rain	1	DAY			
45.	8-7-14	1.85	IN	RAIN	rain	1	DAY			
46.	8-8-14	0.65	IN	RAIN	rain	1	DAY			
47.	8-12-14					7	DAY	56	87	F
48.	8-15-14	0.01	IN	RAIN	rain	1	DAY			
49.	8-16-14	0.73	IN	RAIN	rain	1	DAY			
50.	8-17-14	0.7	IN	RAIN	rain	1	DAY			
51.	8-19-14					7	DAY	67	95	F
52.	8-20-14	0.76	IN	RAIN	rain	1	DAY			

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Application Description

	A
Application Date:	6-25-14
Appl. Start Time:	15:30
Appl. Stop Time:	16:00
Application Method:	Spray
Application Timing:	3-4"W
Application Placement:	BROFOL
Applied By:	LXF
Air Temperature, Unit:	92 F
% Relative Humidity:	48
Wind Velocity, Unit:	2 MPH
Wind Direction:	NW
Dew Presence (Y/N):	N
Soil Temperature, Unit:	96 F
Soil Moisture:	NORMAL
% Cloud Cover:	40
Next Moisture Occurred On:	6-27-14
Time to Next Moisture, Unit:	2 DAY

Crop Stage At Each Application

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

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W
Stage Majority, Percent:	20
Stage Minimum, Percent:	4
Stage Maximum, Percent:	30+
Height, Unit:	6 IN
Height Minimum, Maximum:	0.5 13
Density, Unit:	10 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 7-9-14 Control Percent 14 DA-A	AMAPA-HR 7-23-14 Control Percen 28 DA-A	AMAPA-HR 8-20-14 Control Percent 56 DA-A
1	NONTREATED									0	0	0
2	ROUNDUP POWERMAX	4.5	SL	2.25	lb ae/a	64	fl oz/a	3-4"W	A	85 b	83 ab	70 abc
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	A			
3	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	3-4"W	A	0 d	0 d	0 e
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	A			
4	AATREX 4L	4	SC	1	lb ai/a	1	qt/a	3-4"W	A	60 c	42 c	17 de
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	A			
5	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	3-4"W	A	82 b	53 bc	43 cd
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	A			
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	3-4"W	A	80 b	78 ab	52 bc
7	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	3-4"W	A	90 ab	88 a	87 a
8	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	3-4"W	A	80 b	83 ab	80 ab
9	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-4"W	A	90 ab	88 a	87 a
10	GRAMOXONE 2 SL	2	SL	0.625	lb ai/a	2.5	pt/a	3-4"W	A	99 a	96 a	87 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	A			
LSD (P=.05)										10.5	32.1	34.8
Standard Deviation										6.1	18.6	20.1
CV										8.21	27.24	34.68
Replicate F										2.414	2.647	4.189
Replicate Prob(F)										0.1213	0.1016	0.0344
Treatment F										71.699	8.434	7.816
Treatment Prob(F)										0.0001	0.0002	0.0003

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.

Southern Illinois University

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Trial Comments

1. Protocol: SIU.
2. Ratings: WC 14, 28, and 56 DA-A.
3. No yield (non-crop).
4. Photos.
5. Blanket at PRE timing (start-clean) of Gramoxone (3 pt/A) was applied to all plots on 6-5-14.
6. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
7. The first significant rainfall event following the 3-4"W application was 0.51 inch 13 days later.
8. Not harvested (non-crop).