

Glyphosate-Resistant Palmer Amaranth Control with Two-Pass Programs.

Trial ID: 15-COL-TwoPass-100 Location: Collinsville, IL Trial Year: 2015
Investigator: Ronald F. Krausz

Trial Status: F one-year/final
Initiation Date: 5-19-15
Completion Date: 8-6-15

Trial Location

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

Objectives:

To demonstrate and evaluate glyphosate-resistant Palmer amaranth control with two-pass programs.

Contacts

Study Director: Ronald F. Krausz **Title:** Researcher/Farm Manager
Organization: Belleville Research Center - Southern Illinois Univ Carbondale
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City+State/Prov: Belleville, IL
Postal Code: 62221 **E-mail:** rkrausz@siu.edu
Country: USA

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: P37T09L **BBCH Scale:** BSOY
Description: LL
Planting Date: 5-19-15
Planting Rate, Unit: 140000 S/A **Planting Method:** SEEDED
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

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

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: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	NON-CROP	2014

Maintenance

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

Soil Description

Description Name: Collinsville IL 2014
% 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: ABONOR
Closest Weather Station: www.climate.com **Distance, Unit:** 1 MI

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No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	5-6-15					7	DAY	49	85	F
2.	5-7-15	3.03	IN	RAIN	rain	5	DAY			
3.	5-13-15					7	DAY	45	83	F
4.	5-13-15	0.61	IN	RAIN	rain	5	DAY			
5.	5-20-15					7	DAY	44	85	F
6.	5-20-15	0.16	IN	RAIN	rain	1	DAY			
7.	5-24-15	0.67	IN	RAIN	rain	1	DAY			
8.	5-26-15	0.16	IN	RAIN	rain	2	DAY			
9.	5-27-15					7	DAY	55	84	F
10.	5-29-15	1.88	IN	RAIN	rain	2	DAY			
11.	6-3-15					7	DAY	53	89	F
12.	6-4-15	0.29	IN	RAIN	rain	2	DAY			
13.	6-8-15	2	IN	RAIN	rain	1	DAY			
14.	6-10-15					7	DAY	64	91	F
15.	6-14-15	0.59	IN	RAIN	rain	1	DAY			
16.	6-15-15	0.15	IN	RAIN	rain	1	DAY			
17.	6-16-15	1.4	IN	RAIN	rain	1	DAY			
18.	6-17-15					7	DAY	69	91	F
19.	6-17-15	0.14	IN	RAIN	rain	1	DAY			
20.	6-18-15	1.17	IN	RAIN	rain	1	DAY			
21.	6-19-15	2	IN	RAIN	rain	1	DAY			
22.	6-20-15	0.25	IN	RAIN	rain	2	DAY			
23.	6-24-15					7	DAY	62	93	F
24.	6-25-15	2.19	IN	RAIN	rain	2	DAY			
25.	6-28-15	0.25	IN	RAIN	rain	1	DAY			
26.	7-1-15					7	DAY	63	88	F
27.	7-1-15	0.22	IN	RAIN	rain	1	DAY			
28.	7-6-15	1.96	IN	RAIN	rain	3	DAY			
29.	7-8-15					7	DAY	59	97	F
30.	7-9-15	0.58	IN	RAIN	rain	1	DAY			
31.	7-15-15					7	DAY	69	93	F
32.	7-17-15	0.06	IN	RAIN	rain	1	DAY			
33.	7-19-15	0.64	IN	RAIN	rain	2	DAY			
34.	7-22-15					7	DAY	65	95	F
35.	7-25-15	0.71	IN	RAIN	rain	2	DAY			
36.	7-29-15					7	DAY	65	93	F
37.	8-5-15	2.58	IN	RAIN	rain	1	DAY			
38.	8-9-15	1.19	IN	RAIN	rain	1	DAY			

Glyphosate-Resistant Palmer Amaranth Control with Two-Pass Programs.

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Application Description

	A	B	C
Application Date:	5-19-15	6-11-15	6-22-15
Appl. Start Time:	13:00	9:00	7:30
Appl. Stop Time:	14:00	9:30	8:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	3-5"W-1	3-5"W-2
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	MEJ	MEJ	RFK
Air Temperature, Unit:	70 F	81 F	82 F
% Relative Humidity:	56	65	85
Wind Velocity, Unit:	4 MPH	1 MPH	4 MPH
Wind Direction:	N	S	S
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	68 F	75 F	77 F
Soil Moisture:	NORMAL	NORMAL	ABONOR
% Cloud Cover:	10	10	0
Next Moisture Occurred On:	5-20-15	6-14-15	6-25-15
Time to Next Moisture, Unit:	21 HR	3 DAY	3 DAY

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA	GLXMA	GLXMA
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V5
Stage Minimum, Percent:		V2	V5
Stage Maximum, Percent:		V2	V5
Height, Unit:		8 IN	12 IN
Height Minimum, Maximum:		4 8	10 12

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	NA	6	10
Stage Minimum, Percent:		4	4
Stage Maximum, Percent:		12	12
Height, Unit:		4 IN	5 IN
Height Minimum, Maximum:		3 5	3 6
Density, Unit:		5 FT2	0.1 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:	6.67 FT	6.67 FT	6.67 FT
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		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
														Injury Percent 14 DA-B 14 DA-A	Injury Percent 28 DA-B 28 DA-A	Injury Percent 14 DA-C	Injury Percent 28 DA-C	Injury Percent 56 DA-B 56 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate	Other Unit	Growth Stage	Appl Code								
1	NONTREATED											0	0	0	0	0		
2	SONIC LIBERTY 280 N-PAK AMS	70 WG 2.34 EC 100 SL		0.28 lb ai/a 0.53 lb ai/a 5 % v/v		6.4 oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		8 efg	0 c	0 b	0 a	0 a		
3	SURVEIL GF-3192 LIBERTY 280 N-PAK AMS	48 WG 2.34 EC 100 SL		0.126 lb ai/a 0.53 lb ai/a 5 % v/v		4.2 oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		3 gh	0 c	0 b	0 a	0 a		
4	FIERCE FIRSTRATE LIBERTY 280 N-PAK AMS	76 WG 84 WG 2.34 EC 100 SL		0.143 lb ai/a 0.0315 lb ai/a 0.53 lb ai/a 5 % v/v		3 oz/a 0.6 oz/a 29 fl oz/a 5 % v/v			PRE PRE 3-5"W-2 C 3-5"W-2 C	A A C C		5 fgh	0 c	0 b	0 a	0 a		
5	FIERCE XLT LIBERTY 280 N-PAK AMS	62.41 WG 2.34 EC 100 SL		0.176 lb ai/a 0.53 lb ai/a 5 % v/v		4.5 oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		3 gh	3 bc	0 b	0 a	0 a		
6	VALOR XLT LIBERTY 280 N-PAK AMS	40.3 WG 2.34 EC 100 SL		0.088 lb ai/a 0.53 lb ai/a 5 % v/v		3.5 oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		10 c-f	0 c	0 b	0 a	0 a		
7	AUTHORITY XL LIBERTY 280 N-PAK AMS	70 WG 2.34 EC 100 SL		0.28 lb ai/a 0.53 lb ai/a 5 % v/v		6.4 oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		15 bc	8 ab	0 b	0 a	0 a		
8	AUTHORITY ELITE LIBERTY 280 N-PAK AMS	7 SC 2.34 EC 100 SL		2.08 lb ai/a 0.53 lb ai/a 5 % v/v		38 fl oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		20 ab	8 ab	0 b	0 a	0 a		
9	AUTHORITY FIRST DF ZIDUA LIBERTY 280 N-PAK AMS	70 WG 85 WG 2.34 EC 100 SL		0.28 lb ai/a 0.133 lb ai/a 0.53 lb ai/a 5 % v/v		6.4 oz/a 2.5 oz/a 29 fl oz/a 5 % v/v			PRE PRE 3-5"W-2 C 3-5"W-2 C	A A C C		24 a	10 a	0 b	0 a	0 a		
10	BROADAXE XC LIBERTY 280 N-PAK AMS	7 EC 2.34 EC 100 SL		1.75 lb ai/a 0.53 lb ai/a 5 % v/v		32 fl oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		13 cde	0 c	0 b	0 a	0 a		
11	BROADAXE XC PREFIX LIBERTY 280 N-PAK AMS	7 EC 5.29 EC 2.34 EC 100 SL		1.75 lb ai/a 1.32 lb ai/a 0.53 lb ai/a 5 % v/v		32 fl oz/a 32 fl oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C 3-5"W-2 C	A C C C		14 cd	3 bc	10 a	0 a	0 a		
12	PREFIX LIBERTY 280 N-PAK AMS	5.29 EC 2.34 EC 100 SL		1.65 lb ai/a 0.53 lb ai/a 5 % v/v		2.5 pt/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		5 fgh	0 c	0 b	0 a	0 a		
13	BOUNDARY LIBERTY 280 N-PAK AMS	6.5 EC 2.34 EC 100 SL		1.63 lb ai/a 0.53 lb ai/a 5 % v/v		2 pt/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		0 h	0 c	0 b	0 a	0 a		
14	ENVIVE LIBERTY 280 N-PAK AMS	41.3 WG 2.34 EC 100 SL		0.09 lb ai/a 0.53 lb ai/a 5 % v/v		3.5 oz/a 29 fl oz/a 5 % v/v			PRE 3-5"W-2 C 3-5"W-2 C	A C C		0 h	0 c	0 b	0 a	0 a		

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.
 Could not calculate LSD (% mean diff) for columns 9,11,13,6 because error mean square = 0.

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Pest Code								GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	
Crop Code													
Rating Date													
Rating Type								Injury	Injury	Injury	Injury	Injury	
Rating Unit								Percent	Percent	Percent	Percent	Percent	
Rating Timing								14 DA-B	28 DA-B	14 DA-C	28 DA-C	56 DA-B	
Trt-Eval Interval								14 DA-A	28 DA-A	14 DA-C	28 DA-C	56 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
15	TRIVENCE	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	9 def	5 abc	0 b	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-2	C				
	N-PAK AMS	100	SL	5 %	v/v	5 %	v/v	3-5"W-2	C				
16	ROWEL FX	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	10 c-f	5 abc	0 b	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-2	C				
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	3-5"W-2	C				
	N-PAK AMS	100	SL	5 %	v/v	5 %	v/v	3-5"W-2	C				
17	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-1	B	0 h	0 c		0 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	3-5"W-1	B				
	N-PAK AMS	100	SL	5 %	v/v	5 %	v/v	3-5"W-1	B				
18	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-1	B	0 h	0 c		0 a
	N-PAK AMS	100	SL	5 %	v/v	5 %	v/v	3-5"W-1	B				
LSD P=.05								5.6	5.2	.	.	.	
Standard Deviation								3.9	3.7	0.0	0.0	0.0	
CV								49.1	155.33	0.0	0.0	0.0	
Replicate F								0.277	0.220	0.000	0.000	0.000	
Replicate Prob(F)								0.8417	0.8819	1.0000	1.0000	1.0000	
Treatment F								13.522	3.385	0.000	0.000	0.000	
Treatment Prob(F)								0.0001	0.0005	1.0000	1.0000	1.0000	

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	
									Control Percent 14 DA-B 14 DA-A	Control Percent 28 DA-B 28 DA-A	Control Percent 14 DA-C	Control Percent 28 DA-C	Control Percent 56 DA-B 56 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate	Growth Unit Stage	Appl Code					
1	NONTREATED									0	0	0	0	0
2	SONIC LIBERTY 280 N-PAK AMS	70 WG 2.34 EC 100 SL		0.28 lb ai/a 0.53 lb ai/a 5 % v/v		6.4 oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	94 c	99 a	99 a	99 a
3	SURVEIL GF-3192 LIBERTY 280 N-PAK AMS	48 WG 2.34 EC 100 SL		0.126 lb ai/a 0.53 lb ai/a 5 % v/v		4.2 oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	94 c	99 a	99 a	99 a
4	FIERCE FIRSTRATE LIBERTY 280 N-PAK AMS	76 WG 84 WG 2.34 EC 100 SL		0.143 lb ai/a 0.0315 lb ai/a 0.53 lb ai/a 5 % v/v		3 oz/a 0.6 oz/a 29 fl oz/a 5 % v/v		PRE PRE 3-5"W-2 C 3-5"W-2 C	A A C C	99 a	95 bc	99 a	99 a	99 a
5	FIERCE XLT LIBERTY 280 N-PAK AMS	62.41 WG 2.34 EC 100 SL		0.176 lb ai/a 0.53 lb ai/a 5 % v/v		4.5 oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	97 abc	99 a	98 a	98 a
6	VALOR XLT LIBERTY 280 N-PAK AMS	40.3 WG 2.34 EC 100 SL		0.088 lb ai/a 0.53 lb ai/a 5 % v/v		3.5 oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	94 c	99 a	98 a	96 a
7	AUTHORITY XL LIBERTY 280 N-PAK AMS	70 WG 2.34 EC 100 SL		0.28 lb ai/a 0.53 lb ai/a 5 % v/v		6.4 oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	95 bc	99 a	99 a	99 a
8	AUTHORITY ELITE LIBERTY 280 N-PAK AMS	7 SC 2.34 EC 100 SL		2.08 lb ai/a 0.53 lb ai/a 5 % v/v		38 fl oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	98 ab	99 a	99 a	99 a
9	AUTHORITY FIRST DF ZIDUA LIBERTY 280 N-PAK AMS	70 WG 85 WG 2.34 EC 100 SL		0.28 lb ai/a 0.133 lb ai/a 0.53 lb ai/a 5 % v/v		6.4 oz/a 2.5 oz/a 29 fl oz/a 5 % v/v		PRE PRE 3-5"W-2 C 3-5"W-2 C	A A C C	99 a	99 a	99 a	99 a	98 a
10	BROADAXE XC LIBERTY 280 N-PAK AMS	7 EC 2.34 EC 100 SL		1.75 lb ai/a 0.53 lb ai/a 5 % v/v		32 fl oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	98 ab	99 a	99 a	99 a
11	BROADAXE XC PREFIX LIBERTY 280 N-PAK AMS	7 EC 5.29 EC 2.34 EC 100 SL		1.75 lb ai/a 1.32 lb ai/a 0.53 lb ai/a 5 % v/v		32 fl oz/a 32 fl oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C 3-5"W-2 C	A C C C	99 a	98 ab	99 a	99 a	99 a
12	PREFIX LIBERTY 280 N-PAK AMS	5.29 EC 2.34 EC 100 SL		1.65 lb ai/a 0.53 lb ai/a 5 % v/v		2.5 pt/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	98 ab	99 a	99 a	99 a
13	BOUNDARY LIBERTY 280 N-PAK AMS	6.5 EC 2.34 EC 100 SL		1.63 lb ai/a 0.53 lb ai/a 5 % v/v		2 pt/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	89 d	99 a	99 a	99 a
14	ENVIVE LIBERTY 280 N-PAK AMS	41.3 WG 2.34 EC 100 SL		0.09 lb ai/a 0.53 lb ai/a 5 % v/v		3.5 oz/a 29 fl oz/a 5 % v/v		PRE 3-5"W-2 C 3-5"W-2 C	A C C	99 a	89 d	99 a	98 a	98 a

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Pest Code								AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR	AMAPA-HR		
Crop Code														
Rating Date														
Rating Type								Control	Control	Control	Control	Control		
Rating Unit								Percent	Percent	Percent	Percent	Percent		
Rating Timing								14 DA-B	28 DA-B	14 DA-C	28 DA-C	56 DA-B		
Trt-Eval Interval								14 DA-A	28 DA-A			56 DA-C		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code						
15	TRIVENCE	61.3	WG	0.307	lb ai/a	8	oz/a	PRE	A	99 a	90 d	99 a	98 a	98 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-2	C					
	N-PAK AMS	100	SL		5 % v/v	5	% v/v	3-5"W-2	C					
16	ROWEL FX	40.3	WG	0.088	lb ai/a	3.5	oz/a	PRE	A	99 a	90 d	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-2	C					
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	3-5"W-2	C					
	N-PAK AMS	100	SL		5 % v/v	5	% v/v	3-5"W-2	C					
17	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-1	B	99 a	97 abc			99 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	3-5"W-1	B					
	N-PAK AMS	100	SL		5 % v/v	5	% v/v	3-5"W-1	B					
18	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-5"W-1	B	99 a	90 d			98 a
	N-PAK AMS	100	SL		5 % v/v	5	% v/v	3-5"W-1	B					
LSD P=.05								.	3.5	0.2	1.5	2.1		
Standard Deviation								0.0	2.4	0.1	1.1	1.5		
CV								0.0	2.59	0.13	1.09	1.5		
Replicate F								0.000	4.923	1.000	0.368	1.638		
Replicate Prob(F)								1.0000	0.0046	0.4023	0.7767	0.1929		
Treatment F								0.000	8.760	1.000	0.690	1.289		
Treatment Prob(F)								1.0000	0.0001	0.4708	0.7705	0.2428		

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Trial Comments

1. Protocol: SIU.
2. Ratings:
CI at 14, and 28 DA-A; CI at 14, 28, and 56 DA-B+C;
WC at 14, and 28 DA-A; WC at 0, 14, 28, and 56 DA-B+C;
Rate before spray application B + C.
3. Yield not requested.
4. Applications B and C are 3-5"W-1 (without a PRE) and 3-5"W-2 (with a PRE), respectively.
5. Photos.
6. Rainfall following the PRE application was 0.99 inch over 4 days beginning 21 hours later.
Rainfall following the 3-4"W-1 application was 2.14 inch over 3 days beginning 3 days later.
Rainfall following the 3-4"W-2 application was 2.19 inch over 2 days beginning 3 days later.
7. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
8. Ratings at 14 days after the PRE and 3-4"W-1 application were on 6-2-15 and 6-16-15, respectively, and were prior to the 3-4"W-2 application.
Ratings at 28 days after the PRE and 3-4"W-1 application were on 6-16-15 and 7-9-15, respectively, and were prior to the 3-4"W-2 application.
Ratings at 14 days after the 3-4"W-2 application were also 48 days after the PRE.
Ratings at 28 days after the 3-4"W-2 application were also 62 days after the PRE.
Ratings at 56 days after the 3-4"W-1 and 3-4"W-2 applications were on 8-6-15 and 8-17-15, respectively.
8. Crop injury at 14 and 28 days after the PRE application was stunting.
Crop injury 14 days after the POST application was necrosis.
9. Not harvested (non-crop).