

Cooperative POST Soybean Glyphosate Tank-Mix - Site 3.

Trial ID: 08-Clinton-TM Location: Huey, IL

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Huey IL 62252 USA
 Trial Status: FINAL Initiation Date: 06-15-08

Objectives: Identify any positive or negative interactions when tank-mixing other broadleaf herbicides with glyphosate to achieve consistent and broad-spectrum weed control.

Crop 1: GLXMA Soybean Variety: RR
 Planting Method: SEEDED LB/A Planting Date: 06-15-08
 Row Spacing, Unit: 15 IN Depth, Unit: 1.5 IN

Pest 1 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Field Prep./Maintenance: N 0 LB/A, P205 __ LB/A, K20 __ LB/A

Texture: SILT LOAM
 Fert. Level: P1: __ LB/A, K: __ LB/A

Application Description

	A	B	C	D
Application Date:		07-10-08	07-16-08	07-10-08
Time of Day:	NA	18:00	8:00	18:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	MPOST	LPOST	4"W
Application Placement:	BROSIOI	BROSIOI	BROSIOI	BROSIOI
Applied By:		TGM	DKT	TGM
Air Temperature, Unit:		85 F	82 F	85 F
Wind Velocity, Unit:		2 MPH	1 MPH	2 MPH
Dew Presence (Y/N):		N	N	N
Soil Moisture:		ABONOR	NORMAL	ABONOR
% Cloud Cover:		10	5	10

	07-10-08	07-16-08	07-10-08
Crop stage at application:	NA V2	V4	V2
Height Min, Max (inch):	4 6	10 14	4 6

Pest Stage At Each Application

	07-10-08	07-16-08	07-10-08
Application Date:			
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA 18	26	18
Stage Min, Max:	COTY 46	3 54	COTY 46
Height Majority:	8 IN	12 IN	8 IN
Height Min, Max:	1 15	2 32	1 15
Density, Unit:	7 FT2	7 FT2	7 FT2

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

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Pest Code							AMATA					AMATA	AMATA				
Crop Code							GLXMA	GLXMA	GLXMA	Control	Control	Control	07-10-08	09-29-08			
Rating Date							Injury	Injury	Injury	Percent	Percent	Percent	Plants	Plants			
Rating Data Type							Percent	Percent	Percent	7 DAT	14 DAT	28 DAT	0.5 m2	0.5 m2			
Rating Unit							7 DAT	14 DAT	28 DAT	14 DAT	28 DAT	56 DAT	0 DA-B	0.5 m2			
Rating Timing													0.5 m2	0.5 m2			
Trt-Eval Interval													0 DA-B	EOS			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	0 j	0 j	0 e	99 a	99 a	99 a		0.2 b
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
2	ROUNDUP P-MAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	MPOST	B	0 j	0 j	0 e	99 a	97 a-d	98 ab		0.0 b
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
3	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	MPOST	B	0 j	0 j	0 e	99 a	99 a	98 ab		0.0 b
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
4	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	2 ij	0 j	0 e	99 a	99 a	99 a		0.0 b
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
4	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C								
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C								
5	ROUNDUP P-MAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	MPOST	B	0 j	0 j	0 e	99 a	99 a	99 a		0.0 b
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
5	ROUNDUP P-MAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	LPOST	C								
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C								
6	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	25 ab	9 c	2 de	99 a	97 a-d	99 a		0.0 b
6	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	MPOST	B								
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
7	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	28 a	13 b	6 bc	99 a	98 abc	97 ab		0.2 b
7	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	MPOST	B								
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
8	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	12 fg	4 e-i	0 e	99 a	99 a	99 a		0.0 b
8	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	MPOST	B								
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
9	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	21 bcd	7 c-f	2 de	97 ab	98 abc	99 a		0.2 b
9	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	MPOST	B								
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
10	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	2 ij	2 hij	0 e	99 a	97 a-d	99 a		0.0 b
10	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	MPOST	B								
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
11	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	12 fgh	4 f-i	0 e	99 a	99 a	99 a		0.0 b
11	RESOURCE	0.86	EC	0.027	lb ai/a	4	fl oz/a	MPOST	B								
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
12	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	13 efg	5 d-g	0 e	99 a	99 a	98 ab		0.0 b
12	RESOURCE	0.86	EC	0.054	lb ai/a	8	fl oz/a	MPOST	B								
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
13	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	8 gh	2 g-j	0 e	99 a	99 a	99 a		0.2 b
13	CADET	0.91	EC	0.00284	lb ai/a	0.4	fl oz/a	MPOST	B								
13	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
14	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	12 fgh	5 d-h	0 e	99 a	99 ab	96 b		0.0 b
14	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	MPOST	B								
14	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	MPOST	B	18 cde	4 e-i	0 e	99 a	99 ab	98 ab		0.0 b
15	SYNCHRONY XP	28.4	WG			0.375	oz/a	MPOST	B								
15	CLASSIC	25	WG	0.00504	lb ai/a			MPOST	B								
15	HARMONY SG	50	SG	0.00162	lb ai/a			MPOST	B								
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	MPOST	B								
16	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	0 j	0 j	0 e	95 abc	98 abc	99 a		0.0 b
16	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C								
17	ROUNDUP P-MAX	4.5	SL	1.13	lb ae/a	32	fl oz/a	LPOST	C	0 j	0 j	0 e	97 abc	97 a-d	99 a		0.0 b
17	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C								
18	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	LPOST	C	0 j	0 j	2 de	92 cd	96 a-e	99 a		0.0 b
18	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C								

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Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	AMATA							AMATA	AMATA										
							GLXMA	GLXMA	GLXMA	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	07-10-08 Plants	09-29-08 Plants									
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Injury Percent 7 DAT	Injury Percent 14 DAT	Injury Percent 28 DAT	Control Percent 14 DAT	Control Percent 28 DAT	Control Percent 56 DAT	0 DA-B	EOS								
19	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	23	abc	8	cd	8	ab	95	abc	95	b-e	99	a			0.0	b
19	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	LPOST	C																
19	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
20	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	25	ab	18	a	9	a	89	d	93	e	96	b			0.0	b
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	LPOST	C																
20	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
21	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	16	def	9	c	2	de	94	bcd	96	a-e	99	a			0.0	b
21	FLEXSTAR	1.88	EC	0.147	lb ai/a	10	fl oz/a	LPOST	C																
21	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
22	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	21	bcd	9	c	3	cd	96	abc	96	a-e	99	a			0.0	b
22	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	LPOST	C																
22	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
23	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	0	j	4	e-i	2	de	96	abc	97	a-d	99	a			0.0	b
23	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	LPOST	C																
23	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
24	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	12	fgh	1	ij	0	e	97	abc	98	abc	99	a			0.0	b
24	RESOURCE	0.86	EC	0.027	lb ai/a	4	fl oz/a	LPOST	C																
24	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
25	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	23	abc	15	ab	8	ab	94	abc	93	de	99	a			0.0	b
25	RESOURCE	0.86	EC	0.054	lb ai/a	8	fl oz/a	LPOST	C																
25	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
26	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	10	gh	8	cde	5	c	93	bcd	95	cde	99	a			0.0	b
26	CADET	0.91	EC	0.00284	lb ai/a	0.4	fl oz/a	LPOST	C																
26	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
27	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	7	hi	4	e-i	0	e	96	abc	98	abc	99	a			0.0	b
27	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	LPOST	C																
27	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
28	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	LPOST	C	17	def	6	c-f	2	de	93	bcd	96	a-e	99	a			0.0	b
28	SYNCHRONY XP	28.4	WG			0.375	oz/a	LPOST	C																
28	CLASSIC	25	WG	0.00504	lb ai/a			LPOST	C																
28	HARMONY SG	50	SG	0.00162	lb ai/a			LPOST	C																
28	N-PAK AMS	100	SL	5	% v/v	5	% v/v	LPOST	C																
29	SEE COMMENT 6									0	j	0	j	0	e	99	a	99	ab	99	a			0.0	b
29	SONIC	70	WG	0.131	lb ai/a	3	oz/a	PRE	A																
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4"W	D																
29	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4"W	D																
30	NONTREATED									0	j	0	j	0	e	0	e	0	f	0	c		25.0	21.3	a
LSD (P=.05)										5.1	3.5	3.1	5.0	3.8	2.5							1.87			
Replicate F										6.692	3.186	0.003	3.957	0.421	0.482							1.088			
Replicate Prob(F)										0.0024	0.0487	0.9969	0.0245	0.6587	0.6200							0.3438			
Treatment F										29.111	14.977	6.400	102.566	174.058	409.947							34.673			
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001							0.0001			

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

Trial Comments

1. Protocol: SIU/UIUC/WIU/ISA.

2. Ratings: Visual crop response estimates at 7, 14, and 28 DAT.

Visual estimates of control, by species, at 14 and 28 DAT (rate all plots at 28 days after the LPOST timing); late-season rating of all plots at 56 DAT or at crop harvest.

Evaluate the PRE/POST treatment prior to the POST application and again based on DAT from the respective POST timing in that treatment.

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3. MPOST = 3-5"W; LPOST = 6-10"W.
4. Take weed counts in nontreated at the "B" application timing (No./0.5 m2).
5. Yield.
6. Above normal rainfall in spring 2008 delayed soybean planting until mid-June.
Due to the late planting the PRE application was not applied.
7. DAT = Days after treatment. DA-B = Days after the MPOST application. 0.5 m2 = 0.5 square meter. EOS = End of season.
Ratings at 0 DA-B were on 7-10-08.
Ratings at 7 DAT were on 7-17-08, 7-23-08, and 7-17-08 for the MPOST, LPOST, and 4"W applications, respectively.
Ratings at 14 DAT were on 7-24-08, 7-30-08, and 7-24-08 for the MPOST, LPOST, and 4"W applications, respectively.
Ratings at 28 DAT were on 8-7-08, 8-13-08, and 8-7-08 for the MPOST, LPOST, and 4"W applications, respectively.
Ratings at 56 DAT were on 9-10-08 for all applications.
8. Not harvested.