

## Tankmixtures of SuppoRRt (2,4-DB) and Glyphosate in Soybean.

01-24B-W40

**OBJECTIVE:** Evaluate SuppoRRt (2,4-DB) tankmixtures with glyphosate for improved broadleaf weed control and crop response.

**SUMMARY:** Soybean injury was 5% or less from any treatment in this study. Roundup Ultra Max alone controlled 99% of giant foxtail at 14 days after treatment (DAT). Tank mixing SuppoRRt or FirstRate with Roundup Ultra Max did not increase or decrease giant foxtail, giant ragweed or common ragweed control. Yellow nutsedge control was increased by 11 to 22% and ivyleaf morningglory control was increased by 8 to 11% when SuppoRRt or FirstRate was tank mixed with Roundup Ultra Max. Tank mixing SuppoRRt or FirstRate with Roundup Ultra Max did not affect common waterhemp control at 14 DAT. However, at 28 and 56 DAT, tank mixtures of SuppoRRt or FirstRate plus Roundup Ultra Max controlled significantly less (6 to 8%) common waterhemp than Roundup Ultra Max alone.

### HERBICIDES

FIRSTRATE 84 WG  
 ROUNDUP ULTRA MAX 3.7 SL  
 SUPPORRT 75 WP

### WEEDS

foxtail, giant  
 morningglory, ivyleaf  
 nutsedge, yellow  
 ragweed, common  
 ragweed, giant  
 waterhemp, common

### CROP

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

## Tankmixtures of SuppoRRt (2,4-DB) and Glyphosate in Soybean.

Project Code: 01-24B-W40 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA  
Trial Status: Final Initiation Date: 5-1-01**Objective:**

Evaluate SuppoRRt (2,4-DB) tankmixtures with glyphosate for improved broadleaf weed control and crop response.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. CYPES	nutsedge, yellow	Cyperus esculentus L.
3. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
4. AMBTR	ragweed, giant	Ambrosia trifida L.
5. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.
6. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	GLXMA soybean	Variety:	B-T 371CR
Planting Method:	Seeded	Planting Date:	5-11-01
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	28 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2000				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 150 LB/A				

Soil Name:	Rushville	% OM:	1.1	pH:	6.3	CEC:	13
Texture:	Silt loam	Fert. Level:	P1: 69 LB/A, K: 298 LB/A				

**APPLICATION DESCRIPTION**

	A	B
Application Date:	6-12-01	6-26-01
Time of Day:	8:00	9:00
Application Method:	Spray	Spray
Application Timing:	4-8"W	2-4"RG
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	76 F	70 F
% Relative Humidity:	80	70
Wind Velocity, Unit:	0-3 MPH	0 MPH
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	0

**CROP STAGE AT EACH APPLICATION**

	A	B
Crop 1 Code, Stage:	GLXMA V2	GLXMA V6
Height, Unit:	4-6 IN	9-12 IN

**WEED STAGE AT EACH APPLICATION**

	A	B
Weed 1 Code:	SETFA	SETFA
Stage(leaves):	3-4	
Height(inches):	4-6	
Density:	High	
Weed 2 Code:	CYPES	CYPES
Stage(leaves):	4-6	5-9
Height(inches):	4-6	1-5
Density:	Low	Low
Weed 3 Code:	AMBEL	AMBEL
Stage(leaves):	4-6	
Height(inches):	4-6	
Density:	High	

<b>Weed 4 Code:</b>	AMBTR	AMBTR
<b>Stage(leaves):</b>	4-6	2-10
<b>Height(inches):</b>	2-8	4-7
<b>Density:</b>	Medium	Medium

<b>Weed 5 Code:</b>	IPOHE	IPOHE
<b>Stage(leaves):</b>	1-2	4-6
<b>Height(inches):</b>	2-3	1-3
<b>Density:</b>	Low	Low

<b>Weed 6 Code:</b>	AMATA	AMATA
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**APPLICATION EQUIPMENT**

	<b>A</b>	<b>B</b>
<b>Appl. Equipment:</b>	CO2 sprayer	CO2 sprayer
<b>Operating Pressure:</b>	40 PSI	40 PSI
<b>Nozzle Type:</b>	Flat fan	Flat fan
<b>Nozzle Size:</b>	8002	8002
<b>Boom Length, Unit:</b>	7.5 FT	7.5 FT
<b>Spray Volume, Unit:</b>	20 GPA	20 GPA

**NOTES: NOT HARVESTED.**

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		GLXMA			SETFA			CYPES			AMBEL															
		Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control														
		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent														
		6-26-01	7-10-01	8-7-01	6-26-01	7-10-01	8-7-01	6-26-01	7-10-01	8-7-01	6-26-01	7-10-01	8-7-01													
		14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A													
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code																	
1	NONTREATED									0	0	0	0	0	0	0	0	0								
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	0	0	0	99	90	85	67	62	55	92	93	85					
3	SUPPORRT	75	WP	0.0225	LB AE/A	0.48	OZ/A	4-8"W	A	0	5	0	0	0	0	0	0	0	3	0	0					
4	FIRSTRATE	84	WG	0.016	LB A/A	0.3	OZ/A	4-8"W	A	0	0	0	0	0	0	0	0	0	75	75	65					
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	4-8"W	A																	
4	28% UAN	100	LIQ	2.5	% V/V	2.5	%V/V	4-8"W	A																	
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	0	0	0	99	91	87	82	80	75	96	93	88					
5	SUPPORRT	75	WP	0.0225	LB AE/A	0.48	OZ/A	4-8"W	A																	
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	0	0	0	99	91	88	78	73	68	97	95	91					
6	FIRSTRATE	84	WG	0.016	LB A/A	0.3	OZ/A	4-8"W	A																	
7	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	0	0	0	99	97	96	72	77	73	95	96	94					
7	ROUNDUP ULTRA MAX	3.7	SL	0.56	LB AE/A	1.2	PT/A	2-4"RG	B																	
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	0	1	0	99	98	97	73	78	73	96	97	96					
8	ROUNDUP ULTRA MAX	3.7	SL	0.56	LB AE/A	1.2	PT/A	2-4"RG	B																	
8	SUPPORRT	75	WP	0.0225	LB AE/A	0.48	OZ/A	2-4"RG	B																	
LSD (P=.05)				0.0		1.1		0.0		0.0		1.8		2.4		10.3		8.0		9.1		9.7		4.6		6.0
Replicate F				0.000		1.000		0.000		0.000		1.447		2.362		1.485		0.600		0.344		1.942		0.164		0.188
Replicate Prob(F)				1.0000		0.3927		1.0000		1.0000		0.2684		0.1306		0.2601		0.5623		0.7146		0.1801		0.8499		0.8310
Treatment F				0.000		24.571		0.000		0.000		6592.000		3463.827		130.870		215.629		144.738		174.020		811.457		439.216
Treatment Prob(F)				1.0000		0.0001		1.0000		1.0000		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001

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Weed Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	AMBTR Control	AMBTR Control	AMBTR Control	IPOHE Control	IPOHE Control	IPOHE Control	AMATA Control	AMATA Control	AMATA Control					
					6-26-01	7-10-01	8-7-01	6-26-01	7-10-01	8-7-01	6-26-01	7-10-01	8-7-01					
					14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	NONTREATED																	
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	87	83	78	77	73	68	95	84	80
3	SUPPORRT	75	WP	0.0225	LB AE/A	0.48	OZ/A	4-8"W	A	3	3	0	0	0	0	0	0	0
4	FIRSTRATE	84	WG	0.016	LB A/A	0.3	OZ/A	4-8"W	A	75	78	63	75	77	67	0	0	0
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	4-8"W	A									
4	28% UAN	100	LIQ	2.5	% V/V	2.5	%V/V	4-8"W	A									
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	90	82	77	88	83	78	93	77	72
5	SUPPORRT	75	WP	0.0225	LB AE/A	0.48	OZ/A	4-8"W	A									
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	88	85	83	85	83	78	94	78	73
6	FIRSTRATE	84	WG	0.016	LB A/A	0.3	OZ/A	4-8"W	A									
7	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	87	91	90	77	86	86	95	95	94
7	ROUNDUP ULTRA MAX	3.7	SL	0.56	LB AE/A	1.2	PT/A	2-4"RG	B									
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	A	86	91	91	77	90	89	95	95	95
8	ROUNDUP ULTRA MAX	3.7	SL	0.56	LB AE/A	1.2	PT/A	2-4"RG	B									
8	SUPPORRT	75	WP	0.0225	LB AE/A	0.48	OZ/A	2-4"RG	B									
LSD (P=.05)										7.1	8.0	10.4	11.1	8.1	8.1	2.4	4.0	4.0
Replicate F										2.208	0.735	0.677	1.985	2.002	2.257	3.511	1.498	1.498
Replicate Prob(F)										0.1468	0.4973	0.5241	0.1742	0.1719	0.1414	0.0581	0.2573	0.2573
Treatment F										280.791	217.558	122.822	104.086	203.816	191.955	3707.394	1150.921	1088.593
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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#### Trial Comments

1. Protocol: SIU-BGY.
2. DA-A = days after 4-8"W application.