

Glyphosate tank-mixtures with micro-nutrients.

Project Code: 05-21S-MMW50 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 11-14-05

Objective:

Determine the influence of foliar micronutrients on the efficacy of glyphosate.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. ABUTH	velvetleaf	Abutilon theophrasti Medicus
3. XANST	cocklebur, common	Xanthium strumarium L.
4. IPOSS	morningglory, species	Ipomoea sp.
5. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

Crop 1: GLXMA soybean **Variety:** Asgrow 4403 RR
Planting Method: Seeded **Planting Date:** 5-17-05
Rate: 75 lb/A **Depth:** 1.0 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 30 FT **Reps:** 3
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: ZEAMX, 2004

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 100 LB/A

Soil Name: Ebbert **% OM:** 2.7 **pH:** 6.2 **CEC:** 14
Texture: Silt loam **Fert. Level:** P1: 115 LB/A, K: 500 LB/A

APPLICATION DESCRIPTION

A
Application Date: 06-20-05
Time of Day: 10:30
Application Method: Spray
Application Timing: 8-12"W
Applic. Placement: BROFOL
Air Temp., Unit: 72 F
% Relative Humidity: 71
Wind Velocity, Unit: 4 MPH
Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

A
Crop 1 Code, Stage: GLXMA V3
Height, Unit: 7-8 IN

WEED STAGE AT EACH APPLICATION

A
Weed 1 Code: SETFA
Stage (leaves): 5-7
Height (inches): 4-8
Density: Medium
Weed 2 Code: ABUTH
Stage (leaves): 5-7
Height (inches): 7-12
Density: Medium
Weed 3 Code: XANST
Stage (leaves): 7-9
Height (inches): 10-12
Density: Medium
Weed 4 Code: IPOSS
Stage (leaves): 2-15
Height (inches): 1-5
Density: High
Weed 5 Code: AMBEL
Stage (leaves): 5-8
Height (inches): 8-10
Density: Low

APPLICATION EQUIPMENT

A
Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: XR 110015
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 10 GPA

NOTES:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Injury Percent	GLXMA Injury Percent	SETFA Control Percent	SETFA Control Percent	ABUTH Control Percent	ABUTH Control Percent	XANST Control Percent	XANST Control Percent		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	07-04-05 14 DA-A	07-18-05 28 DA-A	07-04-05 14 DA-A	07-18-05 28 DA-A	07-04-05 14 DA-A	07-18-05 28 DA-A
1	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	48	62	96	99		
2	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	65	72	99	99		
2	CLASS ACT NG	100 LIQ	2.5 % v/v	2.5 % v/v	8-12"W A										
3	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	45	40	80	99		
3	MAX-IN FOR BEANS	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
4	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	48	45	87	99		
4	MAX-IN FOR BEANS	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
4	CLASS ACT NG	100 LIQ	2.5 % v/v	2.5 % v/v	8-12"W A										
5	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	50	40	90	99		
5	MAX-IN MN	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
6	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	48	48	98	99		
6	MAX-IN MN	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
6	CLASS ACT NG	100 LIQ	2.5 % v/v	2.5 % v/v	8-12"W A										
7	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	52	40	97	99		
7	AGM 03014	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
8	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	57	42	98	99		
8	AGM 03014	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
8	CLASS ACT NG	100 LIQ	2.5 % v/v	2.5 % v/v	8-12"W A										
9	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	47	43	85	99		
9	AGM 03015	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
10	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	55	35	80	99		
10	AGM 03015	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
10	CLASS ACT NG	100 LIQ	2.5 % v/v	2.5 % v/v	8-12"W A										
11	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	50	32	94	99		
11	AGM 03016	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
12	ROUNDUP W-MAX	4.5 SL	0.56 lb ae/a	16 fl oz/a	8-12"W A	0	0	99	99	48	35	98	99		
12	AGM 03016	100 LIQ	1.0 qt/a	1 qt/a	8-12"W A										
12	CLASS ACT NG	100 LIQ	2.5 % v/v	2.5 % v/v	8-12"W A										
13	NONTREATED					0	0	0	0	0	0	0	0		
	LSD (P=.05)					0.0	0.0	0.0	0.0	26.6	29.9	10.8	0.0		
	Replicate F					0.000	0.000	0.000	0.000	1.368	2.481	0.017	0.000		
	Replicate Prob(F)					1.0000	1.0000	1.0000	1.0000	0.2739	0.1049	0.9828	1.0000		
	Treatment F					0.000	0.000	0.000	0.000	2.748	2.615	50.600	0.000		
	Treatment Prob(F)					1.0000	1.0000	1.0000	1.0000	0.0169	0.0217	0.0001	1.0000		

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Weed Code	IPOSS	IPOSS	AMBEL	AMBEL
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	07-04-05	07-18-05	07-04-05	07-18-05
Trt-Eval Interval	14 DA-A	28 DA-A	14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	IPOSS 07-04-05	IPOSS 07-18-05	AMBEL 07-04-05	AMBEL 07-18-05
1	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	52	47	94	99
2	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	58	42	97	99
2	CLASS ACT NG	100	LIQ	2.5	% v/v	2.5	% v/v	8-12"W	A				
3	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	57	30	91	99
3	MAX-IN FOR BEANS	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
4	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	55	33	90	99
4	MAX-IN FOR BEANS	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
4	CLASS ACT NG	100	LIQ	2.5	% v/v	2.5	% v/v	8-12"W	A				
5	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	58	33	95	99
5	MAX-IN MN	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
6	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	58	37	96	99
6	MAX-IN MN	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
6	CLASS ACT NG	100	LIQ	2.5	% v/v	2.5	% v/v	8-12"W	A				
7	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	62	40	91	99
7	AGM 03014	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
8	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	53	37	90	99
8	AGM 03014	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
8	CLASS ACT NG	100	LIQ	2.5	% v/v	2.5	% v/v	8-12"W	A				
9	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	52	33	88	99
9	AGM 03015	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
10	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	55	32	82	99
10	AGM 03015	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
10	CLASS ACT NG	100	LIQ	2.5	% v/v	2.5	% v/v	8-12"W	A				
11	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	57	20	88	99
11	AGM 03016	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
12	ROUNDUP W-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	8-12"W	A	55	30	88	99
12	AGM 03016	100	LIQ	1.0	qt/a	1	qt/a	8-12"W	A				
12	CLASS ACT NG	100	LIQ	2.5	% v/v	2.5	% v/v	8-12"W	A				
13	NONTREATED									0	0	0	0
LSD (P=.05)										10.4	18.1	8.7	0.0
Replicate F										3.753	2.498	12.053	0.000
Replicate Prob(F)										0.0382	0.1034	0.0002	1.0000
Treatment F										19.619	3.473	73.518	0.000
Treatment Prob(F)										0.0001	0.0046	0.0001	1.0000

Trial Comments

1. Protocol: Agrilience.
2. Ratings: CIWC 14 and 28 DAT.
3. DA-A = Days after 8-12"W application.