Foliar Nutrients with Glyphosate.

Trial ID: 08-21N-E180 Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
City State Zip Country: Belleville IL 62221 USA
Trial Status: FINAL **Initiation Date:** 06-18-08

Objectives: Determine the efficacy of glyphosate as influenced by tank-mixtures with commercial and experimental foliar nutient products in soybean.

Crop 1: GLXMA Soybean **Variety:** AG 4404 RR/STS
Planting Method: SEEDED **Planting Date:** 06-18-08
Rate, Unit: 75 LB/A **Depth, Unit:** 1.0 IN
Row Spacing, Unit: 30 IN

Pest 1 Type: W	**Code:** SETFA	Setaria faberi Herrm.	foxtail, giant
Pest 2 Type: W	**Code:** AMATA	Amaranthus rudis Sauer	waterhemp, common
Pest 3 Type: W	**Code:** IPOHE	Ipomoea hederacea (L.) jacq.	morningglory, annual
Pest 4 Type: W	**Code:** AMBTR	Ambrosia trifida L.	ragweed, giant
Pest 5 Type: W	**Code:** ABUTH	Abutilon theophrasti Medicus	velvetleaf

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

Prior Crops, Year
1. ZEAMD 2007

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

% OM: 2.7 **Texture:** SILT LOAM
pH: 6.2 **Soil Name:** BETHALTO
CEC: 14 **Fert. Level:** P1: 115 LB/A, K: 500 LB/A

Application Description

	A
Application Date:	07-14-08
Time of Day:	13:30
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	DKT
Air Temperature, Unit:	84 F
% Relative Humidity:	50
Wind Velocity, Unit:	2 MPH
Soil Temperature, Unit:	87 F
Soil Moisture:	ABONOR
	07-14-08
Crop stage at application:	V2
Height Min, Max (inch):	7 10

Pest Stage At Each Application

Application Date:	07-14-08
Weed Code:	SETFA
Stage Majority (leaves):	5
Stage Min, Max:	2 7
Height Majority:	10 IN
Height Min, Max:	2 14
Density, Unit:	2 FT2
Weed Code:	AMATA
Stage Majority (leaves):	4
Stage Min, Max:	COTY 9
Height Majority:	3 IN
Height Min, Max:	1 7
Density, Unit:	1 FT2
Weed Code:	IPOHE
Stage Majority (leaves):	4
Stage Min, Max:	COTY 6
Height Majority:	4 IN
Height Min, Max:	2 6
Density, Unit:	1 FT2
Weed Code:	AMBTR
Stage Majority (leaves):	8
Stage Min, Max:	6 10
Height Majority:	8 IN
Height Min, Max:	4 12
Density, Unit:	1 FT2
Weed Code:	ABUTH
Stage Majority (leaves):	3
Stage Min, Max:	COTY 5
Height Majority:	6 IN
Height Min, Max:	1 8
Density, Unit:	5 FT2

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Application Equipment

Appl. Equipment:	CO2 sprayer
Operating Pressure:	30 PSI
Nozzle Type:	Flat fan
Nozzle Size:	TT 110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 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	GLXMA 07-28-08 Injury Percent 14 DA-A	GLXMA 08-11-08 Injury Percent 28 DA-A	SETFA 07-28-08 Control Percent 14 DA-A	SETFA 08-11-08 Control Percent 28 DA-A	AMATA 07-28-08 Control Percent 14 DA-A	AMATA 08-11-08 Control Percent 28 DA-A	IPOHE 07-28-08 Control Percent 14 DA-A	IPOHE 08-11-08 Control Percent 28 DA-A
1	NONTREATED									0 a	0 a	0 b	0 b	0 j	0 l	0 g	0 h
2	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	92 abc	89 b-e	60 bc	80 cde
3	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	97 ab	95 abc	58 bc	87 abc
3	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
4	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	90 abc	85 d-g	40 ef	77 def
4	MAX-IN FOR BEANS	100	SL	1	qt/a	1	qt/a	6-8"W	A								
5	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	88 bcd	80 f-i	63 b	80 cde
5	MAX-IN FOR BEANS	100	SL	1	qt/a	1	qt/a	6-8"W	A								
5	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
6	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	50 i	55 k	43 def	72 fg
6	MAX-IN MN	100	SL	1	qt/a	1	qt/a	6-8"W	A								
7	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	85 cd	83 e-h	52 cd	77 def
7	MAX-IN MN	100	SL	1	qt/a	1	qt/a	6-8"W	A								
7	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
8	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	75 ef	75 hij	43 def	72 fg
8	AGM 06018	100	SL	1.5	pt/a	1.5	pt/a	6-8"W	A								
9	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	80 de	78 g-j	42 def	67 g
9	AGM 06018	100	SL	1.5	pt/a	1.5	pt/a	6-8"W	A								
9	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
10	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	65 gh	73 ij	50 cde	73 efg
10	AGM 07007	100	SL	1.5	qt/a	1.5	qt/a	6-8"W	A								
11	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	95 abc	93 a-d	52 cd	82 bcd
11	AGM 07007	100	SL	1.5	qt/a	1.5	qt/a	6-8"W	A								
11	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
12	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	57 hi	53 k	33 f	70 fg
12	AGM 07027	100	SL	1	qt/a	1	qt/a	6-8"W	A								
13	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	87 cd	87 c-f	50 cde	82 bcd
13	AGM 07027	100	SL	1	qt/a	1	qt/a	6-8"W	A								
13	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
14	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	70 fg	70 j	33 f	73 efg
14	AGM 07027	100	SL	1	qt/a	1	qt/a	6-8"W	A								
14	AGM 08005	100	SL	6	fl oz/a	6	fl oz/a	6-8"W	A								
14	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
15	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	93 abc	95 abc	52 cd	85 abc
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-8"W	A								
16	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	99 a	98 a	65 b	88 ab
16	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-8"W	A								
17	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	98 a	98 ab	63 b	85 abc
17	N-SURE	100	SL	1	gal/a	1	gal/a	6-8"W	A								
18	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	0 a	0 a	99 a	99 a	92 abc	96 ab	77 a	92 a
18	N-SURE	100	SL	1	gal/a	1	gal/a	6-8"W	A								
LSD (P=.05)										0.0	0.0	0.0	0.0	9.8	8.9	10.2	6.8
Replicate F										0.000	0.000	0.000	0.000	1.056	1.551	1.721	1.089
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	0.3627	0.2318	0.1941	0.3481
Treatment F										0.000	0.000	0.000	0.000	52.242	60.116	22.433	71.054
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

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

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
Pest Code										AMBTR	AMBTR	ABUTH	ABUTH
Crop Code													
Rating Date										07-28-08	08-11-08	07-28-08	08-11-08
Rating Data Type										Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval										14 DA-A	28 DA-A	14 DA-A	28 DA-A
1	NONTREATED									0 j	0 g	0 j	0 i
2	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	78 bcd	90 ab	70 c	90 ab
3	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	82 abc	92 ab	72 bc	87 ab
3	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
4	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	63 ef	83 bc	48 ef	65 def
4	MAX-IN FOR BEANS	100	SL	1	qt/a	1	qt/a	6-8"W	A				
5	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	73 cde	85 bc	60 d	82 abc
5	MAX-IN FOR BEANS	100	SL	1	qt/a	1	qt/a	6-8"W	A				
5	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
6	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	55 fgh	67 e	42 fg	50 g
6	MAX-IN MN	100	SL	1	qt/a	1	qt/a	6-8"W	A				
7	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	67 def	88 abc	58 de	60 efg
7	MAX-IN MN	100	SL	1	qt/a	1	qt/a	6-8"W	A				
7	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
8	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	57 fgh	70 de	27 hi	50 g
8	AGM 06018	100	SL	1.5	pt/a	1.5	pt/a	6-8"W	A				
9	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	60 efg	85 bc	48 ef	77 bcd
9	AGM 06018	100	SL	1.5	pt/a	1.5	pt/a	6-8"W	A				
9	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
10	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	67 def	78 cd	35 gh	55 fg
10	AGM 07007	100	SL	1.5	qt/a	1.5	qt/a	6-8"W	A				
11	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	82 abc	90 ab	58 d	85 ab
11	AGM 07007	100	SL	1.5	qt/a	1.5	qt/a	6-8"W	A				
11	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
12	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	40 i	45 f	20 i	30 h
12	AGM 07027	100	SL	1	qt/a	1	qt/a	6-8"W	A				
13	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	43 hi	72 de	60 d	65 def
13	AGM 07027	100	SL	1	qt/a	1	qt/a	6-8"W	A				
13	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
14	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	47 ghi	55 f	33 gh	50 g
14	AGM 07027	100	SL	1	qt/a	1	qt/a	6-8"W	A				
14	AGM 08005	100	SL	6	fl oz/a	6	fl oz/a	6-8"W	A				
14	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
15	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	85 abc	92 ab	80 ab	88 ab
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-8"W	A				
16	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	92 ab	96 a	83 a	93 a
16	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-8"W	A				
17	ROUNDUP P-MAX	4.5	SL	0.56	lb ae/a	16	fl oz/a	6-8"W	A	85 abc	92 ab	60 d	70 cde
17	N-SURE	100	SL	1	gal/a	1	gal/a	6-8"W	A				
18	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	95 a	96 a	83 a	88 ab
18	N-SURE	100	SL	1	gal/a	1	gal/a	6-8"W	A				
LSD (P=.05)										14.6	10.3	9.7	13.8
Replicate F										1.494	1.362	3.982	0.548
Replicate Prob(F)										0.2407	0.2710	0.0301	0.5840
Treatment F										21.056	44.543	46.274	25.793
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

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

Foliar Nutrients with Glyphosate.

Trial ID: 08-21N-E180 Location: Belleville Res. Center

Trial Comments

1. Protocol: Winfield Solutions; Tessenderlo-Kerley.
2. Ratings: CI/WC at 14 + 28 DAT.
3. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
4. DA-A = Days after the 6-8"W application.
5. Not harvested.