

Winfield Solutions Micronutrients plus Glyphosate and AMS.

Trial ID: 11-10B-ME70

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: 6-7-11

Objectives: Evaluate the influence of micronutrients and AMS
 on the efficacy of glyphosate.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDS Planting Date: 6-7-11
 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: CYPES Cyperus esculentus L. nutsedge, yellow
 Pest 3 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 4 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 5 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 24 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2010

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 2 Texture: SILT LOAM
 pH: 6.1 Soil Name: PIERRON
 CEC: 9 Fert. Level: P1: 82 LB/A, K: 312 LB/A

Application Description

A
 Application Date: 7-11-11
 Time of Day: 8:00
 Application Method: Spray
 Application Timing: 8"W
 Application Placement: BROFOL
 Applied By: LAH
 Air Temperature, Unit: 86 F
 % Relative Humidity: 75
 Wind Velocity, Unit: 2 MPH
 Wind Direction: N
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 83 F
 Soil Moisture: ABONOR
 % Cloud Cover: 0

11-7-11
 Crop stage at application: V3-V4
 Height Min, Max (inch): 5 8

Pest Stage At Each Application

7-11-11
 Weed Code: SETFA
 Stage Majority (leaves): 5
 Stage Min, Max: 2 7
 Height Majority: 8 IN
 Height Min, Max: 4 15
 Density, Unit: 1 FT2
 Weed Code: CYPES
 Stage Majority (leaves): 7
 Stage Min, Max: 4 13
 Height Majority: 8 IN
 Height Min, Max: 6 16
 Density, Unit: 1 FT2
 Weed Code: AMBTR
 Stage Majority (leaves): 8
 Stage Min, Max: 6 10
 Height Majority: 8 IN
 Height Min, Max: 4 10
 Density, Unit: 3 FT2
 Weed Code: ABUTH
 Stage Majority (leaves): 3
 Stage Min, Max: 3 6
 Height Majority: 2 IN
 Height Min, Max: 3 6
 Density, Unit: 0.5 FT2
 Weed Code: IPOHE
 Stage Majority (leaves): 6
 Stage Min, Max: 4 10
 Height Majority: 3 IN
 Height Min, Max: 2 4
 Density, Unit: 0.1 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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Pest Code		Crop Code		Rating Date		Rating Data Type		Rating Unit		Rating Timing		Trt-Eval Interval		GLXMA	GLXMA	SETFA	SETFA	CYPES	CYPES	AMBTR	AMBTR
														7-25-11	8-8-11	7-25-11	8-8-11	7-25-11	8-8-11	7-25-11	8-8-11
														Injury	Injury	Control	Control	Control	Control	Control	Control
														Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
														14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code												
1	NONTREATED													0 a	0 a	0 c	0 b	0 b	0 d	0 d	0 d
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	63 a	68 abc	94 a	97 a
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	60 a	65 bc	89 bc	94 ab
3	AG 08034	100	SL	2	% v/v	2	% v/v	8"W	A												
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	60 a	63 c	90 abc	91 bc
4	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A												
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	63 a	72 abc	91 ab	95 a
5	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A												
5	AG 08034	100	SL	1	% v/v	1	% v/v	8"W	A												
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	63 a	73 ab	91 ab	93 ab
6	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A												
6	AG 08034	100	SL	1.5	% v/v	1.5	% v/v	8"W	A												
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	63 a	68 abc	90 abc	93 ab
7	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A												
7	AG 08034	100	SL	2	% v/v	2	% v/v	8"W	A												
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	62 a	72 abc	91 ab	96 a
8	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A												
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 b	99 a	60 a	75 a	94 a	93 ab
9	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A												
9	AG 08034	100	SL	1	% v/v	1	% v/v	8"W	A												
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	65 a	73 ab	90 abc	95 a
10	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A												
10	AG 08034	100	SL	1.5	% v/v	1.5	% v/v	8"W	A												
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A					0 a	0 a	99 a	99 a	63 a	73 abc	86 c	87 c
11	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A												
11	AG 08034	100	SL	2	% v/v	2	% v/v	8"W	A												
LSD (P=.05)													0.0	0.0	0.3	0.0	5.8	10.0	4.6	4.2	
Replicate F													0.000	0.000	0.800	0.000	0.050	3.094	0.622	2.563	
Replicate Prob(F)													1.0000	1.0000	0.4665	1.0000	0.9517	0.0714	0.5487	0.1064	
Treatment F													0.000	0.000	93996.970	0.000	93.007	41.248	314.553	396.257	
Treatment Prob(F)													1.0000	1.0000	0.0001	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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Pest Code	ABUTH	ABUTH	IPOHE	IPOHE
Crop Code				
Rating Date	7-25-11	8-8-11	7-25-11	8-8-11
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

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED									0 f	0 d	0 e	0 d
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	73 a	90 ab	70 abc	90 ab
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	69 a-d	89 ab	69 abc	91 ab
3	AG 08034	100	SL	2	% v/v	2	% v/v	8"W	A				
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	62 e	89 ab	65 cd	91 ab
4	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A				
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	70 abc	94 a	66 bcd	92 ab
5	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A				
5	AG 08034	100	SL	1	% v/v	1	% v/v	8"W	A				
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	68 a-e	89 ab	68 abc	87 b
6	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A				
6	AG 08034	100	SL	1.5	% v/v	1.5	% v/v	8"W	A				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	65 cde	88 b	63 d	90 ab
7	AGM 09026	100	SL	2.5	% v/v	1	qt/a	8"W	A				
7	AG 08034	100	SL	2	% v/v	2	% v/v	8"W	A				
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	67 b-e	91 ab	71 ab	90 ab
8	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A				
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	70 abc	88 ab	68 a-d	88 ab
9	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A				
9	AG 08034	100	SL	1	% v/v	1	% v/v	8"W	A				
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	72 ab	89 ab	72 a	93 a
10	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A				
10	AG 08034	100	SL	1.5	% v/v	1.5	% v/v	8"W	A				
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8"W	A	64 de	80 c	65 cd	65 c
11	AGM 09027	100	SL	2.5	% v/v	1	qt/a	8"W	A				
11	AG 08034	100	SL	2	% v/v	2	% v/v	8"W	A				

LSD (P=.05)

5.6 6.5 5.5 6.6

Replicate F

0.729 5.464 0.623 1.123

Replicate Prob(F)

0.4997 0.0176 0.5506 0.3530

Treatment F

124.906 159.664 127.375 158.629

Treatment Prob(F)

0.0001 0.0001 0.0001 0.0001

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

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 14 and 28 DAT.
3. Mixing order:
 - Water (at least 75% of the water)
 - AG 08034
 - Micronutrients (AGM)
 - Glyphosate
4. Missing data due to low populations of some weeds following standing water in some plots.