

AMS Replacements - General.

Project Code: 04-11A-W95 Location: Belleville Reseach Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 8-19-04

Objective:

Determine the effective of various adjuvants on glyphosate activity in hard water.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMATA	waterhemp, common	Amaranthus rudis Sauer
3. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

Crop 1:	GLXMA soybean	Variety:	AG 4403 RR
Planting Method:	Seeded	Planting Date:	6-14-04
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	26 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2003				

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A and 3 ton/A lime

Soil Name: Weir	% OM: 2	pH: 5.6	CEC: 11
Texture: Silt loam	Fert. Level: P1: 75 LB/A,	K: 348 LB/A	

APPLICATION DESCRIPTION

A

Application Date:	7-16-04
Time of Day:	12:00
Application Method:	Spray
Application Timing:	8-12"W
Applic. Placement:	BROFOL
Air Temp., Unit:	78 F
% Relative Humidity:	80
Wind Velocity, Unit:	3 MPH
Soil Moisture:	NORMAL

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:	GLXMA V4
Height, Unit:	8-9 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	SETFA
Stage(leaves):	4-5
Height(inches):	8-9
Density:	High
Weed 2 Code:	AMATA
Stage(leaves):	8-12
Height(inches):	6-10
Density:	High
Weed 3 Code:	AMBEL
Stage(leaves):	6-9
Height(inches):	5-9
Density:	Low

APPLICATION EQUIPMENT

A

Appl. Equipment:	CO2 sprayer
Operating Pressure:	40 PSI
Nozzle Type:	Flat fan
Nozzle Size:	TT 110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	12.5 GPA

NOTES:

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Crop Code																
Rating Data Type																
Rating Unit																
Rating Date																
Trt-Eval Interval																

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Injury Percent 7-30-04 14 DA-A	GLXMA Injury Percent 8-13-04 28 DA-A	SETFA Control Percent 7-30-04 14 DA-A	SETFA Control Percent 8-13-04 28 DA-A	AMATA Control Percent 7-30-04 14 DA-A	AMATA Control Percent 8-13-04 28 DA-A	AMBEL Control Percent 7-30-04 14 DA-A	AMBEL Control Percent 8-13-04 28 DA-A
1	DEIONIZED WATER									0	0	92	99	80	78	92	92
1	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
2	HARD WATER									0	0	90	96	73	75	82	82
2	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
3	HARD WATER									0	0	93	99	82	82	85	86
3	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
3	AMS	100	DRY	1.02	% W/W	8.5	LB/100 GAL	8-12"	W A								
4	HARD WATER									0	0	94	99	83	83	85	85
4	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
4	ATR-0407	100	LIQ	0.5	% V/V	0.5	% V/V	8-12"	W A								
5	HARD WATER									0	0	90	94	75	73	83	83
5	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
5	CHOICE	100	LIQ	0.5	% V/V	0.5	% V/V	8-12"	W A								
6	HARD WATER									0	0	94	99	77	77	77	77
6	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
6	QUEST	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"	W A								
7	HARD WATER									0	0	94	99	75	77	80	80
7	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
7	SPRAY SAVVY	100	LIQ	0.35	% V/V	0.35	% V/V	8-12"	W A								
8	HARD WATER									0	0	95	99	75	75	92	92
8	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
8	FULL LOAD HWP	100	LIQ	0.5	% V/V	0.5	% V/V	8-12"	W A								
9	HARD WATER									0	0	95	99	75	72	83	83
9	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
9	ALLIANCE	100	LIQ	1.25	% V/V	1.25	% V/V	8-12"	W A								
10	HARD WATER									0	0	95	99	68	67	80	80
10	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
10	HERBOLYTE	100	LIQ	1.0	% V/V	1	% V/V	8-12"	W A								
11	HARD WATER									0	0	96	99	87	90	88	88
11	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
11	L-283	100	LIQ	1.0	% V/V	1	% V/V	8-12"	W A								
12	HARD WATER									0	0	95	99	84	85	87	89
12	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
12	CITRON	100	DRY	0.264	% W/W	2.2	LB/100 GAL	8-12"	W A								
13	HARD WATER									0	0	95	99	84	85	87	89
13	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"	W A								
13	ATR-0409	100	LIQ	0.5	% V/V	0.5	% V/V	8-12"	W A								

Southern Illinois University

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14	HARD WATER									0	0	95	99	84	85	87	87
14	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"W	A								
14	REDDY IT	100	LIQ	0.3	% V/V	0.3	% V/V	8-12"W	A								
15	HARD WATER									0	0	95	99	80	82	83	83
15	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"W	A								
15	NTANK	100	LIQ	1.0	% V/V	1	% V/V	8-12"W	A								
16	NONTREATED									0	0	0	0	0	0	0	0
17	HARD WATER									0	0	95	99	82	83	87	87
17	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"W	A								
17	SOIL BOOST PLUS	100	LIQ	2.5	% V/V	2.5	% V/V	8-12"W	A								
18	HARD WATER									0	0	95	99	82	81	87	87
18	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-12"W	A								
18	SOIL BOOST PLUS	100	LIQ	1.25	% V/V	1.25	% V/V	8-12"W	A								
LSD (P=.05)										0.0	0.0	4.9	3.8	9.8	9.2	8.2	8.4
Replicate F										0.000	0.000	5.288	2.025	2.017	4.790	5.129	5.464
Replicate Prob(F)										1.0000	1.0000	0.0104	0.1486	0.1497	0.0151	0.0117	0.0091
Treatment F										0.000	0.000	181.430	335.374	33.543	39.668	54.789	52.522
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: SIU - BGY/RZ/PM.
2. Ratings: CI and WC 14 and 28 DAT.
3. DA-A = Days after 8-12"W application.