

AMS Replacements with Glyphosate - United Suppliers.

Project Code: 07-1-EEE35 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: 1-23-08**Objective:**

Compare unloaded glyphosate efficacy in hard water with water conditioners and AMS on Roundup Ready soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMATA	waterhemp, common	Amaranthus rudis Sauer
3. ABUTH	velvetleaf	Abutilon theophrasti Medicus
4. PANDI	panicum, fall	Panicum dichotomiflorum Michx.

Crop 1:	GLXMA soybean	Variety:	Asgrow 4404 RR/STS
Planting Method:	Seeded	Planting Date:	6-2-07
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:	No-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2006				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 100 LB/A				

Soil Name:	Weir	% OM:	1.6	pH:	6.7	CEC:	8
Texture:	Silt loam	Fert. Level:	P1: 96 LB/A, K: 327 LB/A				

APPLICATION DESCRIPTION

A	
Application Date:	6-27-07
Time of Day:	13:00
Application Method:	Spray
Application Timing:	6-8"W
Applic. Placement:	BROFOL
Air Temp., Unit:	86 F
% Relative Humidity:	88
Wind Velocity, Unit:	0-2 MPH
Dew Presence (Y/N):	N
Soil Moisture:	ABONOR
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

A	
Crop 1 Code, Stage:	GLXMA V2
Height, Unit:	7 IN

WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code:	SETFA
Stage(leaves):	3-5
Height(inches):	2-6
Density:	Low
Weed 2 Code:	AMATA
Stage(leaves):	5-30
Height(inches):	3-9
Density:	Medium
Weed 3 Code:	ABUTH
Stage(leaves):	3-8
Height(inches):	5-8
Density:	Low
Weed 4 Code:	PANDI
Stage(leaves):	3-8
Height(inches):	2-6
Density:	Medium

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:	10 GPA

NOTES:

AMS Replacements with Glyphosate - United Suppliers.

Project Code: 07-1-EEE35 Location: Belleville Research Center
 Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Injury Percent	GLXMA Injury Percent	SETFA Control Percent	SETFA Control Percent	AMATA Control Percent	AMATA Control Percent	ABUTH Control Percent	ABUTH Control Percent	PANDI Control Percent	PANDI Control Percent
										7-11-07	7-25-07	7-11-07	7-25-07	7-11-07	7-25-07	7-11-07	7-25-07	7-11-07	7-25-07
										14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
1	HARD WATER (350 PPM)									0 a	0 a	98 a	95 a	72 ab	52 b	67 ab	52 c	80 ab	82 ab
1	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
1	FASTRACK	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"W	A										
2	HARD WATER (350 PPM)									0 a	0 a	99 a	98 a	83 a	88 a	88 a	82 a	80 ab	88 a
2	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
2	ULTRA SURF	100	LIQ	2.5	% v/v	2.5	gal/100 gal	6-8"W	A										
3	HARD WATER (350 PPM)									0 a	0 a	99 a	98 a	81 a	77 ab	83 a	78 a	75 ab	80 ab
3	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
3	ULTRA SURF	100	LIQ	5	% v/v	5	gal/100 gal	6-8"W	A										
4	HARD WATER (350 PPM)									0 a	0 a	99 a	97 a	78 ab	63 ab	76 ab	53 c	82 a	78 ab
4	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
4	PAYOFF PLUS	100	DRY	1.5	% w/w	12.5	lb/100 gal	6-8"W	A										
5	HARD WATER (350 PPM)									0 a	0 a	98 a	98 a	65 b	60 ab	73 ab	68 abc	77 ab	85 ab
5	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
5	CHEMSURF 80	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A										
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A										
6	HARD WATER (350 PPM)									0 a	0 a	99 a	97 a	75 ab	69 ab	75 ab	75 ab	77 ab	67 b
6	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
6	US333	100	LIQ	0.5	% v/v	4	pt/100 gal	6-8"W	A										
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A										
7	HARD WATER (350 PPM)									0 a	0 a	98 a	95 a	70 ab	55 ab	50 b	58 bc	70 b	68 b
7	GLY STAR ORIGINAL	3	SL	0.375	lb ae/a	16	fl oz/a	6-8"W	A										
8	NONTREATED									0 a	0 a	0 b	0 b	0 c	0 c	0 c	0 d	0 c	0 c
LSD (P=.05)										0.0	0.0	1.8	4.0	15.2	33.7	26.3	19.6	10.5	19.8
Replicate F										0.000	0.000	1.140	2.055	1.299	0.434	2.723	3.652	2.679	0.991
Replicate Prob(F)										1.0000	1.0000	0.3479	0.1650	0.3038	0.6565	0.1059	0.0577	0.1035	0.3959
Treatment F										0.000	0.000	3552.651	677.806	29.235	5.621	11.010	16.912	62.815	19.414
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0030	0.0002	0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI/WC at 14 + 28 DAT.
3. Use hard water (350 ppm CaCO3 equivalent).
4. Can be no-till or reduced-till.
5. DA-A = Days after 6-8"W application.