

Water Conditioning Adjuvants for Unloaded Glyphosate - United Suppliers.

Project Code: 06-52-MW30 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: 12-8-06**Objective:**

Compare glyphosate efficacy with water conditioners/adjuvant combinations compared to AMS/NIS.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBTR	ragweed, giant	Ambrosia trifida L.
3. XANST	cocklebur, common	Xanthium strumarium L.
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus
5. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	GLXMA soybean	Variety:	Asgrow 4403 RR
Planting Method:	Seeded	Planting Date:	5-26-06
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	25 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2005				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K2O 100 LB/A				

Soil Name:	Weir	% OM:	2.2	pH:	6.9	CEC:	9
Texture:	Silt loam	Fert. Level:	P1: 107 LB/A, K: 420 LB/A				

APPLICATION DESCRIPTION

Application Date:	6-22-06
Time of Day:	8:30
Application Method:	Spray
Application Timing:	6-8"W
Applic. Placement:	BROFOL
Air Temp., Unit:	84 F
% Relative Humidity:	90
Wind Velocity, Unit:	1 MPH
Dew Presence (Y/N):	N
% Cloud Cover:	40

CROP STAGE AT EACH APPLICATION

Crop 1 Code, Stage:	GLXMA V3
Height, Unit:	6 IN

WEED STAGE AT EACH APPLICATION

Weed 1 Code:	SETFA
Stage (leaves):	2-4
Height (inches):	5-8
Density:	High
Weed 2 Code:	AMBTR
Stage (leaves):	6-10
Height (inches):	5-10
Density:	Medium
Weed 3 Code:	XANST
Stage (leaves):	6-8
Height (inches):	5-9
Density:	Low
Weed 4 Code:	ABUTH
Stage (leaves):	3-5
Height (inches):	3-9
Density:	Low
Weed 5 Code:	AMATA
Stage (leaves):	7-11
Height (inches):	3-8
Density:	Medium

APPLICATION EQUIPMENT

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:	12.5 GPA

NOTES:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Injury Percent 6-25-06 3 DA-A	GLXMA Injury Percent 6-29-06 7 DA-A	SETFA Control Percent 6-29-06 7 DA-A	SETFA Control Percent 7-6-06 14 DA-A	SETFA Control Percent 7-20-06 28 DA-A	AMBTR Control Percent 6-29-06 7 DA-A	AMBTR Control Percent 7-6-06 14 DA-A	AMBTR Control Percent 7-20-06 28 DA-A
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code								
1	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	0	0	96	99	98	63	83	70
2	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	0	0	96	99	98	65	85	75
2	FASTTRACK	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A								
3	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	0	0	96	99	99	65	80	62
3	USEXP3	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A								
4	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	0	0	97	99	99	63	86	73
4	USEXP4	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A								
5	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	0	0	97	99	98	72	86	80
5	PAYOFF PLUS	100	DRY	1.5	% w/w	12.5	lb/100 gal	6-8"	W A								
6	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	0	0	98	99	99	72	88	84
6	CHEM-SURF 80	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"	W A								
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"	W A								
7	NONTREATED									0	0	0	0	0	0	0	0
LSD (P=.05)										0.0	0.0	1.3	0.4	0.9	8.3	9.6	15.2
Replicate F										0.000	0.000	2.531	1.000	1.200	0.165	0.415	4.661
Replicate Prob(F)										1.0000	1.0000	0.1210	0.3966	0.3349	0.8497	0.6697	0.0318
Treatment F										0.000	0.000	7886.782	88111.009	14936.801	89.872	106.767	34.128
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	XANST Control Percent 6-29-06 7 DA-A	XANST Control Percent 7-6-06 14 DA-A	XANST Control Percent 7-20-06 28 DA-A	ABUTH Control Percent 6-29-06 7 DA-A	ABUTH Control Percent 7-6-06 14 DA-A	ABUTH Control Percent 7-20-06 28 DA-A
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	99	99	99	30	40	25
2	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	98	99	99	37	43	33
2	FASTTRACK	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A						
3	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	99	99	99	32	40	28
3	USEXP3	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A						
4	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	99	99	99	35	43	38
4	USEXP4	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A						
5	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	99	99	98	43	60	55
5	PAYOFF PLUS	100	DRY	1.5	% w/w	12.5	lb/100 gal	6-8"	W A						
6	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	99	99	99	42	55	52
6	CHEM-SURF 80	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"	W A						
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"	W A						
7	NONTREATED									0	0	0	0	0	0
LSD (P=.05)										0.7	0.0	1.0	4.1	8.5	10.0
Replicate F										0.300	0.000	0.146	0.222	7.878	3.774
Replicate Prob(F)										0.7462	1.0000	0.8654	0.8040	0.0065	0.0535
Treatment F										26345.202	0.000	12807.562	119.111	49.235	32.264
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	0.0001	0.0001

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Weed Code	AMATA	AMATA	AMATA
Crop Code			
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Date	6-29-06	7-6-06	7-20-06
Trt-Eval Interval	7 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			
1	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	67	86	58
2	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	67	88	58
2	FASTTRACK	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A			
3	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	67	85	63
3	USEXP3	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A			
4	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	72	87	65
4	USEXP4	100	LIQ	0.5	% v/v	2	qt/100 gal	6-8"	W A			
5	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	75	91	68
5	PAYOFF PLUS	100	DRY	1.5	% w/w	12.5	lb/100 gal	6-8"	W A			
6	GLY STAR ORIGINAL	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"	W A	73	92	70
6	CHEM-SURF 80	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"	W A			
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"	W A			
7	NONTREATED									0	0	0
LSD (P=.05)										5.8	6.5	13.5
Replicate F										0.340	3.823	1.072
Replicate Prob(F)										0.7187	0.0519	0.3729
Treatment F										203.132	253.855	31.340
Treatment Prob(F)										0.0001	0.0001	0.0001

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI 3 + 7 DAT; WC 7, 14 + 28 DAT.
3. Spraying instructions: Use XR 110015 tips.
4. Weed control ratings at 28 DA-A that are lower than the 14 DA-A rating indicate weed recovery not new emergence.
5. Not harvested.