

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

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:** 06-10-10

Objectives: Compare experimental water conditioners to AMS for glyphosate weed control activity and crop response.

Crop 1: GLXMA Soybean **Variety:** AG 4404 **Description:** RR
Planting Method: SEEDED **Planting Date:** 06-10-10
Rate, Unit: 75 LB/A **Depth, Unit:** 1.0 IN
Row Spacing, Unit: 30 IN

Pest 1 Type: W	Code: GGGAN		grasses, annual
Pest 2 Type: W	Code: AMBTR	Ambrosia trifida L.	ragweed, giant
Pest 3 Type: W	Code: AMATA	Amaranthus rudis Sauer	waterhemp, common
Pest 4 Type: W	Code: IPOSS		morningglory, species
Pest 5 Type: W	Code: ABUTH	Abutilon theophrasti Medicus	velvetleaf
Pest 6 Type: W	Code: AMBEL	Ambrosia artemisiifolia L.	ragweed, common

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 28 FT **Tillage Type:** REDUCED-TILL
Replications: 3 **Study Design:** Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A

% OM: 1.6	Texture: SILT LOAM
pH: 6.8	Soil Name: PIERRON
CEC: 8	Fert. Level: P1: 77 LB/A, K: 252 LB/A

Application Description**A**

Application Date: 07-05-10
Time of Day: 7:00
Application Method: Spray
Application Timing: 6-8"W
Application Placement: BROFOL
Applied By: NVH
Air Temperature, Unit: 76 F
% Relative Humidity: 92
Wind Velocity, Unit: 1 MPH
Wind Direction: S
Dew Presence (Y/N): N
Soil Moisture: NORMAL
% Cloud Cover: 30

Crop stage at application: 07-05-10
 V4-V5
Height Min, Max (inch): 10 12

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

Pest Stage At Each Application

Application Date: 07-05-10
Weed Code: GGGAN
Stage Majority (leaves): 5
Stage Min, Max: 1 7
Height Majority: 8 IN
Height Min, Max: 4 12
Density, Unit: 2 FT2
Weed Code: AMBTR
Stage Majority (leaves): 7
Stage Min, Max: 1 12
Height Majority: 7 IN
Height Min, Max: 4 10
Density, Unit: 0.7 FT2
Weed Code: AMATA
Stage Majority (leaves): 10
Stage Min, Max: 2 8
Height Majority: 8 IN
Height Min, Max: 4 10
Density, Unit: 2 FT2
Weed Code: IPOSS
Stage Majority (leaves): 6
Stage Min, Max: 1 8
Height Majority: 6 IN
Height Min, Max: 2 8
Density, Unit: 0.1 FT2
Weed Code: ABUTH
Stage Majority (leaves): 6
Stage Min, Max: 4 8
Height Majority: 7 IN
Height Min, Max: 4 9
Density, Unit: 0.01 FT2
Weed Code: AMBEL
Stage Majority (leaves): 8
Stage Min, Max: 2 14
Height Majority: 6 IN
Height Min, Max: 4 8
Density, Unit: 1 FT2

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

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

										TTTTT				
Pest Code										GLXMA				
Crop Code										07-08-10				
Rating Date										07-12-10				
Rating Data Type										07-19-10				
Rating Unit										08-02-10				
Rating Timing										07-08-10				
Trt-Eval Interval										Control				
										Percent				
										3 DA-A				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	12 i
1	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
2	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	16 gh
2	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
2	AMS	100	SG	1	% w/w	8.5	lb/100 gal	6-8"W	A					
3	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	22 a-e
3	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
3	AMS	100	SG	2	% w/w	17	lb/100 gal	6-8"W	A					
4	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	23 a-d
4	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
4	USEX10-01	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A					
5	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	21 a-f
5	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
5	USEX10-02	100	SL	2.5	% v/v	10	qt/100 gal	6-8"W	A					
6	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	21 a-f
6	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
6	USEX10-03	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					
7	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	18 fgh
7	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
7	USEX10-04	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A					
8	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	20 c-f
8	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
8	USEX10-05	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A					
9	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	18 fgh
9	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
9	USEX10-06	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A					
10	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	18 fgh
10	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
10	USEX10-07	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					
11	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	15 hi
11	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
11	USEX10-08	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					
12	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	19 d-g
12	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
12	USEX10-09	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					
13	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	24 a
13	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
13	USEX10-10	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					
14	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	23 abc
14	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
14	USEX10-11	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					
15	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	22 a-e
15	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
15	USEX10-12	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A					
16	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	24 ab
16	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
16	USEX10-13	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A					
17	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	18 e-h
17	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
17	USEX10-14	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A					
18	HARD WATER (350 PPM)									0 a	0 a	0 a	0 a	18 fgh
18	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A					
18	USEX10-15	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A					

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

Pest Code	TTTTT												
Crop Code													
Rating Date	GLXMA	GLXMA	GLXMA	GLXMA									
Rating Data Type	07-08-10	07-12-10	07-19-10	08-02-10	07-08-10								
Rating Unit	Injury	Injury	Injury	Injury	Control								
Rating Timing	Percent	Percent	Percent	Percent	Percent								
Trt-Eval Interval	3 DA-A	7 DA-A	14 DA-A	28 DA-A	3 DA-A								
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
19	HARD WATER (350 PPM)								0 a	0 a	0 a	0 a	20 b-f
19	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A						
19	USEX10-16	100	SL	1.25 % v/v	5 qt/100 gal	6-8"W	A						
20	HARD WATER (350 PPM)								0 a	0 a	0 a	0 a	24 a
20	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A						
20	USEX10-17	100	SL	2.5 % v/v	10 qt/100 gal	6-8"W	A						
21	HARD WATER (350 PPM)								0 a	0 a	0 a	0 a	19 d-g
21	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A						
21	USEX10-18	100	SL	0.25 % v/v	1 qt/100 gal	6-8"W	A						
22	HARD WATER (350 PPM)								0 a	0 a	0 a	0 a	16 gh
22	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A						
22	USEX10-19	100	SL	0.25 % v/v	1 qt/100 gal	6-8"W	A						
23	NONTREATED								0 a	0 a	0 a	0 a	0 j
LSD (P=.05)									0.0	0.0	0.0	0.0	3.4
Replicate F									0.000	0.000	0.000	0.000	3.649
Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	0.0342
Treatment F									0.000	0.000	0.000	0.000	18.952
Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	0.0001

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

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

										GGGAN	GGGAN	GGGAN	AMBTR	AMBTR	AMBTR
Pest Code										07-12-10	07-19-10	08-02-10	07-12-10	07-19-10	08-02-10
Crop Code										Control	Control	Control	Control	Control	Control
Rating Date										Percent	Percent	Percent	Percent	Percent	Percent
Rating Data Type															
Rating Unit															
Rating Timing															
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A	7 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	HARD WATER (350 PPM)									72 e	94 cde	90 de	81 c-f	93 a-e	81 a
1	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
2	HARD WATER (350 PPM)									73 de	97 ab	92 a-e	79 ef	92 b-e	85 a
2	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
2	AMS	100	SG	1	% w/w	8.5	lb/100 gal	6-8"W	A						
3	HARD WATER (350 PPM)									82 ab	97 a	92 a-e	87 abc	96 a-d	83 a
3	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
3	AMS	100	SG	2	% w/w	17	lb/100 gal	6-8"W	A						
4	HARD WATER (350 PPM)									82 ab	97 a	94 abc	87 a-d	95 a-d	89 a
4	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
4	USEX10-01	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A						
5	HARD WATER (350 PPM)									80 ab	96 ab	92 a-e	85 cde	96 abc	88 a
5	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
5	USEX10-02	100	SL	2.5	% v/v	10	qt/100 gal	6-8"W	A						
6	HARD WATER (350 PPM)									80 ab	96 abc	94 abc	83 c-f	93 a-e	84 a
6	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
6	USEX10-03	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
7	HARD WATER (350 PPM)									78 bc	93 de	91 cde	83 c-f	92 b-e	87 a
7	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
7	USEX10-04	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A						
8	HARD WATER (350 PPM)									78 bc	94 cde	91 b-e	81 def	91 de	82 a
8	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
8	USEX10-05	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
9	HARD WATER (350 PPM)									73 de	95 a-d	92 a-e	79 ef	95 a-e	91 a
9	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
9	USEX10-06	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
10	HARD WATER (350 PPM)									75 cde	96 ab	91 b-e	82 c-f	95 a-d	91 a
10	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
10	USEX10-07	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
11	HARD WATER (350 PPM)									75 cde	95 a-e	89 e	83 c-f	95 a-e	89 a
11	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
11	USEX10-08	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
12	HARD WATER (350 PPM)									78 bc	96 ab	93 a-d	85 cde	94 a-e	90 a
12	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
12	USEX10-09	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
13	HARD WATER (350 PPM)									81 ab	96 ab	94 abc	86 bcd	96 abc	89 a
13	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
13	USEX10-10	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
14	HARD WATER (350 PPM)									81 ab	97 ab	94 ab	92 ab	96 ab	85 a
14	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
14	USEX10-11	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
15	HARD WATER (350 PPM)									77 bcd	96 ab	92 a-e	86 bcd	96 ab	86 a
15	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
15	USEX10-12	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A						
16	HARD WATER (350 PPM)									83 a	95 a-d	92 a-e	93 a	97 a	87 a
16	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
16	USEX10-13	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A						
17	HARD WATER (350 PPM)									79 abc	97 ab	94 abc	83 c-f	92 b-e	83 a
17	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
17	USEX10-14	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
18	HARD WATER (350 PPM)									78 bcd	93 e	91 cde	78 f	83 f	84 a
18	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
18	USEX10-15	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

Pest Code										GGGAN	GGGAN	GGGAN	AMBTR	AMBTR	AMBTR
Crop Code															
Rating Date										07-12-10	07-19-10	08-02-10	07-12-10	07-19-10	08-02-10
Rating Data Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code						
19	HARD WATER (350 PPM)									79 abc	93 de	95 a	86 bcd	90 e	81 a
19	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
19	USEX10-16	100	SL	1.25 % v/v		5 qt/100 gal		6-8"W	A						
20	HARD WATER (350 PPM)									79 abc	97 a	93 a-d	86 bcd	96 a-d	83 a
20	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
20	USEX10-17	100	SL	2.5 % v/v		10 qt/100 gal		6-8"W	A						
21	HARD WATER (350 PPM)									80 ab	97 ab	91 b-e	85 cde	95 a-d	87 a
21	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
21	USEX10-18	100	SL	0.25 % v/v		1 qt/100 gal		6-8"W	A						
22	HARD WATER (350 PPM)									72 e	94 b-e	91 cde	81 c-f	91 cde	87 a
22	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
22	USEX10-19	100	SL	0.25 % v/v		1 qt/100 gal		6-8"W	A						
23	NONTREATED									0 f	0 f	0 f	0 g	0 g	0 b
LSD (P=.05)										5.0	2.7	3.4	6.0	4.7	11.1
Replicate F										1.133	0.206	1.949	1.025	1.850	6.642
Replicate Prob(F)										0.3312	0.8142	0.1545	0.3673	0.1693	0.0030
Treatment F										90.836	460.536	262.913	71.646	144.422	21.998
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

										AMATA	AMATA	AMATA	IPOSS	IPOSS	IPOSS
Pest Code										07-12-10	07-19-10	08-02-10	07-12-10	07-19-10	08-02-10
Crop Code										Control	Control	Control	Control	Control	Control
Rating Date										Percent	Percent	Percent	Percent	Percent	Percent
Rating Data Type										7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Rating Unit															
Rating Timing															
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	HARD WATER (350 PPM)									63 e	73 ij	73 de	58 e	65 f	58 ef
1	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
2	HARD WATER (350 PPM)									70 a-d	81 c-g	73 de	62 cde	65 f	60 def
2	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
2	AMS	100	SG	1	% w/w	8.5	lb/100 gal	6-8"W	A						
3	HARD WATER (350 PPM)									73 ab	93 a	86 ab	70 a	83 a	75 ab
3	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
3	AMS	100	SG	2	% w/w	17	lb/100 gal	6-8"W	A						
4	HARD WATER (350 PPM)									70 a-d	87 bc	88 a	62 cde	77 bc	75 ab
4	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
4	USEX10-01	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A						
5	HARD WATER (350 PPM)									73 ab	92 ab	88 a	65 a-d	77 bc	70 abc
5	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
5	USEX10-02	100	SL	2.5	% v/v	10	qt/100 gal	6-8"W	A						
6	HARD WATER (350 PPM)									70 a-d	78 d-i	88 a	60 de	70 def	73 abc
6	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
6	USEX10-03	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
7	HARD WATER (350 PPM)									65 de	69 j	78 b-e	58 e	70 def	70 abc
7	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
7	USEX10-04	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A						
8	HARD WATER (350 PPM)									70 a-d	77 f-i	80 bcd	66 a-d	73 cd	58 ef
8	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
8	USEX10-05	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
9	HARD WATER (350 PPM)									68 b-e	77 f-i	77 cde	63 b-e	68 def	72 abc
9	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
9	USEX10-06	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
10	HARD WATER (350 PPM)									68 cde	76 ghi	80 bcd	60 de	73 cde	72 abc
10	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
10	USEX10-07	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
11	HARD WATER (350 PPM)									66 de	73 ij	72 e	60 de	64 f	65 cde
11	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
11	USEX10-08	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
12	HARD WATER (350 PPM)									67 cde	75 hij	72 e	63 b-e	68 def	72 abc
12	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
12	USEX10-09	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
13	HARD WATER (350 PPM)									70 a-d	82 c-g	80 bcd	62 cde	76 bc	68 bcd
13	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
13	USEX10-10	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
14	HARD WATER (350 PPM)									71 abc	84 cd	78 b-e	68 abc	78 abc	72 abc
14	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
14	USEX10-11	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
15	HARD WATER (350 PPM)									75 a	91 ab	83 abc	63 b-e	79 abc	77 ab
15	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
15	USEX10-12	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A						
16	HARD WATER (350 PPM)									73 ab	80 d-h	85 ab	69 ab	81 ab	78 a
16	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
16	USEX10-13	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A						
17	HARD WATER (350 PPM)									72 abc	82 c-f	77 cde	66 a-d	77 abc	73 abc
17	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
17	USEX10-14	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
18	HARD WATER (350 PPM)									68 cde	74 ij	73 de	63 b-e	67 ef	68 bcd
18	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
18	USEX10-15	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

Pest Code										AMATA	AMATA	AMATA	IPOSS	IPOSS	IPOSS
Crop Code										07-12-10	07-19-10	08-02-10	07-12-10	07-19-10	08-02-10
Rating Date										Control	Control	Control	Control	Control	Control
Rating Data Type										Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit															
Rating Timing															
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code						
19	HARD WATER (350 PPM)									73 ab	82 c-g	85 ab	67 abc	77 bc	75 ab
19	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
19	USEX10-16	100	SL	1.25 % v/v		5 qt/100 gal		6-8"W	A						
20	HARD WATER (350 PPM)									70 a-d	83 cde	85 ab	66 a-d	78 abc	73 abc
20	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
20	USEX10-17	100	SL	2.5 % v/v		10 qt/100 gal		6-8"W	A						
21	HARD WATER (350 PPM)									70 a-d	78 e-i	80 bcd	66 a-d	69 def	75 ab
21	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
21	USEX10-18	100	SL	0.25 % v/v		1 qt/100 gal		6-8"W	A						
22	HARD WATER (350 PPM)									67 cde	74 hij	76 de	62 cde	67 ef	52 f
22	GLY STAR PLUS	3	SL	0.75 lb ae/a		32 fl oz/a		6-8"W	A						
22	USEX10-19	100	SL	0.25 % v/v		1 qt/100 gal		6-8"W	A						
23	NONTREATED									0 f	0 k	0 f	0 f	0 g	0 g
LSD (P=.05)										5.3	5.8	7.5	6.3	6.2	9.1
Replicate F										0.916	1.579	0.521	1.181	0.777	0.875
Replicate Prob(F)										0.4076	0.2177	0.5977	0.3164	0.4662	0.4241
Treatment F										63.992	75.808	44.011	38.897	55.503	25.392
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

										ABUTH	ABUTH	ABUTH	AMBEL	AMBEL	AMBEL
Pest Code										07-12-10	07-19-10	08-02-10	07-12-10	07-19-10	08-02-10
Crop Code										Control	Control	Control	Control	Control	Control
Rating Date										Percent	Percent	Percent	Percent	Percent	Percent
Rating Data Type															
Rating Unit															
Rating Timing															
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A	7 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	HARD WATER (350 PPM)									65 a-e	67 fg	65 g	78 d	92 f	85 e
1	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
2	HARD WATER (350 PPM)									68 abc	73 def	73 c-f	78 d	94 ef	88 de
2	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
2	AMS	100	SG	1	% w/w	8.5	lb/100 gal	6-8"W	A						
3	HARD WATER (350 PPM)									71 a	90 a	85 a	88 a	99 a	98 a
3	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
3	AMS	100	SG	2	% w/w	17	lb/100 gal	6-8"W	A						
4	HARD WATER (350 PPM)									67 a-e	80 bc	83 ab	87 ab	97 a-d	95 abc
4	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
4	USEX10-01	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A						
5	HARD WATER (350 PPM)									70 ab	83 b	81 abc	84 abc	98 ab	98 ab
5	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
5	USEX10-02	100	SL	2.5	% v/v	10	qt/100 gal	6-8"W	A						
6	HARD WATER (350 PPM)									62 ef	68 efg	77 b-e	78 d	95 de	92 cd
6	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
6	USEX10-03	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
7	HARD WATER (350 PPM)									63 c-f	72 def	73 c-f	85 ab	96 b-e	94 abc
7	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
7	USEX10-04	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A						
8	HARD WATER (350 PPM)									64 b-e	68 efg	68 fg	78 d	96 a-e	94 abc
8	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
8	USEX10-05	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
9	HARD WATER (350 PPM)									65 b-e	71 d-g	72 d-g	83 abc	96 b-e	94 abc
9	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
9	USEX10-06	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
10	HARD WATER (350 PPM)									58 f	67 fg	76 b-f	84 abc	97 a-d	95 abc
10	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
10	USEX10-07	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
11	HARD WATER (350 PPM)									64 c-f	65 g	77 a-e	84 abc	95 cde	87 e
11	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
11	USEX10-08	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
12	HARD WATER (350 PPM)									63 c-f	71 d-g	65 g	82 bcd	96 a-e	95 abc
12	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
12	USEX10-09	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
13	HARD WATER (350 PPM)									68 a-d	73 def	75 c-f	84 abc	97 a-d	96 abc
13	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
13	USEX10-10	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
14	HARD WATER (350 PPM)									68 a-d	75 cd	75 c-f	88 a	97 a-d	96 abc
14	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
14	USEX10-11	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						
15	HARD WATER (350 PPM)									66 a-e	77 bcd	73 c-f	84 abc	97 a-d	96 abc
15	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
15	USEX10-12	100	SL	1.25	% v/v	5	qt/100 gal	6-8"W	A						
16	HARD WATER (350 PPM)									70 ab	83 b	78 a-d	88 a	97 a-d	96 abc
16	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
16	USEX10-13	100	SL	0.5	% v/v	2	qt/100 gal	6-8"W	A						
17	HARD WATER (350 PPM)									67 a-e	74 cde	72 d-g	85 ab	98 abc	97 abc
17	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
17	USEX10-14	100	SL	0.75	% v/v	3	qt/100 gal	6-8"W	A						
18	HARD WATER (350 PPM)									62 def	67 fg	70 efg	85 ab	97 a-e	96 abc
18	GLY STAR PLUS	3	SL	0.75	lb ae/a	32	fl oz/a	6-8"W	A						
18	USEX10-15	100	SL	0.25	% v/v	1	qt/100 gal	6-8"W	A						

Water Conditioners with Glyphosate - United Suppliers.

Trial ID: 10-2B-MW120

Location: Belleville Res. Center

Pest Code									ABUTH	ABUTH	ABUTH	AMBEL	AMBEL	AMBEL						
Crop Code									07-12-10	07-19-10	08-02-10	07-12-10	07-19-10	08-02-10						
Rating Date									Control	Control	Control	Control	Control	Control						
Rating Data Type									Percent	Percent	Percent	Percent	Percent	Percent						
Rating Unit									7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A						
Rating Timing																				
Trt-Eval Interval																				
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code												
19	HARD WATER (350 PPM)								68	abc	68	efg	78	a-d	84	abc	97	a-d	96	abc
19	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A													
19	USEX10-16	100	SL	1.25 % v/v	5 qt/100 gal	6-8"W	A													
20	HARD WATER (350 PPM)								68	abc	77	bcd	80	abc	84	abc	98	abc	96	abc
20	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A													
20	USEX10-17	100	SL	2.5 % v/v	10 qt/100 gal	6-8"W	A													
21	HARD WATER (350 PPM)								68	abc	75	cd	80	abc	83	abc	96	b-e	93	bc
21	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A													
21	USEX10-18	100	SL	0.25 % v/v	1 qt/100 gal	6-8"W	A													
22	HARD WATER (350 PPM)								63	c-f	72	def	78	a-d	80	cd	97	a-e	95	abc
22	GLY STAR PLUS	3	SL	0.75 lb ae/a	32 fl oz/a	6-8"W	A													
22	USEX10-19	100	SL	0.25 % v/v	1 qt/100 gal	6-8"W	A													
23	NONTREATED								0	g	0	h	0	h	0	e	0	g	0	f
LSD (P=.05)									5.9		6.5		8.3		4.9		2.8		4.6	
Replicate F									2.260		2.198		3.218		7.402		1.437		4.496	
Replicate Prob(F)									0.1164		0.1231		0.0496		0.0017		0.2485		0.0167	
Treatment F									47.014		52.278		32.246		104.943		413.885		155.498	
Treatment Prob(F)									0.0001		0.0001		0.0001		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 at 3, 7, 14, and 28 DAT; Overall weed efficacy at 3 DAT; WC at 7, 14, and 28 DAT.
3. Note any handling, mixing or spraying characteristics.
For all products at mixing and spraying, there were no notable differences and no difficulty.
4. HARD WATER (350 PPM) = Ca + Mg hard water.
HARD WATER MIXING INSTRUCTIONS:
To make 1 gallon of 350 ppm Ca + Mg hard water use the formula:
2.354 g of CaCl₂·2H₂O (Calcium Chloride Dihydrate)
0.809 g of MgCl₂·6H₂O (Magnesium Chloride Hexahydrate)
1 gallon distilled water
Be sure to use the dihydrate form of the calcium chloride and the hexahydrate form of the magnesium chloride.
Be sure to stir in the salts to insure that the solutions are all homogeneous before use.
5. IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).
TTTTT = Weeds generally.
6. Not harvested.