

Non-ionic Surfactants with Glyphosate - Agrilience.

Project Code: 07-2A-MME50 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:**

Evaluate experimental surfactant-based adjuvants for use with unloaded glyphosate formulations.

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

Crop 1:	GLXMA soybean	Variety:	Asgrow 4404 RR/STS
Planting Method:	Seeded	Planting Date:	6-3-07
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:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2006				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 0 LB/A				

Soil Name:	Weir	% OM:	1.8	pH:	6	CEC:	7
Texture:	Silt loam	Fert. Level:	P1: 90 LB/A, K: 419 LB/A				

APPLICATION DESCRIPTION

APPLICATION DESCRIPTION		A
Application Date:	6-29-07	
Time of Day:	17:00	
Application Method:	Spray	
Application Timing:	6-8"W	
Applic. Placement:	BROFOL	
Air Temp., Unit:	74 F	
% Relative Humidity:	92	
Wind Velocity, Unit:	1-3 MPH	
Dew Presence (Y/N):	N	
Soil Moisture:	ABONOR	
% Cloud Cover:	50	

CROP STAGE AT EACH APPLICATION

CROP STAGE AT EACH APPLICATION		A
Crop 1 Code, Stage:	GLXMA V3	
Height, Unit:	10-11 IN	

WEED STAGE AT EACH APPLICATION

WEED STAGE AT EACH APPLICATION		A
Weed 1 Code:	AMATA	
Stage(leaves):	8-16	
Height(inches):	6-12	
Density:	High	
Weed 2 Code:	AMBTR	
Stage(leaves):	4-8	
Height(inches):	4-8	
Density:	Low	
Weed 3 Code:	ABUTH	
Stage(leaves):	5-8	
Height(inches):	8-14	
Density:	Medium	
Weed 4 Code:	SETFA	
Stage(leaves):	6-10	
Height(inches):	7-9	
Density:	Medium	
Weed 5 Code:	PANDI	
Stage(leaves):	6-10	
Height(inches):	6-10	
Density:	Low	

APPLICATION EQUIPMENT

APPLICATION EQUIPMENT		A
Appl. Equipment:	CO2 sprayer	
Operating Pressure:	40 PSI	
Nozzle Type:	Flat fan	
Nozzle Size:	XR 8002	
Boom Length, Unit:	7.5 FT	
Spray Volume, Unit:	15 GPA	

NOTES:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Injury Percent	GLXMA Injury Percent	GGGAN Control Percent	GGGAN Control Percent	AMATA Control Percent	AMATA Control Percent	AMBEL Control Percent	AMBEL Control Percent	ABUTH Control Percent	ABUTH Control Percent				
						7-13-07	7-27-07	7-13-07	7-27-07	7-13-07	7-27-07	7-13-07	7-27-07	7-13-07	7-27-07				
						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				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
1	NONTREATED									0 a	0 a	0 c	0 c	0 e	0 c				
2	TOUCHDOWN HI-TECH PREFERENCE	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	98 ab	98 a	95 abc	95 ab	98 a	97 a	91 ab	95 a
3	TOUCHDOWN HI-TECH AG 03019	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	98 ab	98 a	97 ab	92 ab	99 a	97 a	97 a	97 a
4	TOUCHDOWN HI-TECH AG 03037	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	99 a	98 a	91 d	88 b	98 a	97 a	88 bcd	87 b
5	TOUCHDOWN HI-TECH AG 05045	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	98 ab	96 ab	93 bcd	91 ab	99 a	98 a	88 bcd	94 a
6	TOUCHDOWN HI-TECH AG 06001	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	98 ab	98 a	97 ab	97 a	98 a	97 a	90 abc	94 a
7	TOUCHDOWN HI-TECH AG 06011	5 SC 100 LIQ		0.188 5	lb ae/a fl oz/a	4.8 5	fl oz/a fl oz/a	6-8"W 6-8"W	A A	0 a	0 a	98 ab	97 ab	95 abc	92 ab	98 a	96 a	88 bcd	95 a
8	TOUCHDOWN HI-TECH AG 06099	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	98 ab	97 a	96 ab	92 ab	99 a	98 a	83 cd	94 a
9	TOUCHDOWN HI-TECH AG 07008	5 SC 100 LIQ		0.188 0.25	lb ae/a % v/v	4.8 0.25	fl oz/a % v/v	6-8"W 6-8"W	A A	0 a	0 a	98 b	97 ab	92 cd	91 ab	99 a	98 a	82 d	93 ab
10	TOUCHDOWN HI-TECH	5 SC		0.188	lb ae/a	4.8	fl oz/a	6-8"W	A	0 a	0 a	98 ab	95 b	97 a	96 a	98 a	98 a	85 bcd	93 ab
LSD (P=.05)										0.0	0.0	0.7	2.2	3.6	7.8	1.4	1.5	7.7	6.6
Replicate F										0.000	0.000	3.857	6.429	3.041	1.027	0.895	0.742	0.934	0.787
Replicate Prob(F)										1.0000	1.0000	0.0404	0.0078	0.0728	0.3781	0.4259	0.4901	0.4147	0.4732
Treatment F										0.000	0.000	15913.247	1675.112	617.463	126.719	4104.733	3950.330	119.983	185.167
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	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: Agrilience.
2. Ratings: CI/WC at 14 + 28 DAT.
3. DA-A = Days after 6-8"W application. GGGAN = Annual grasses including SETFA and PANDI.