

Glyphosate Surfactant Comparison in Soybean.

00-6A-E50

OBJECTIVE: Evaluate the performance of various adjuvants applied with glyphosate.

SUMMARY: No soybean injury was observed from any treatment. All Mirage treatments controlled at least 93% control of giant foxtail at 28 days after treatment (DAT) except Mirage plus Tradition 93 plus Choice (86% control). Common ragweed control was 80 to 88% at 28 DAT with no significant differences between treatments. Common cocklebur, velvetleaf, morningglory species, and common waterhemp control was less than 79% from all Mirage treatments. Mirage plus LI 700 plus Choice tended to provide less weed control than other treatments.

HERBICIDE/ADJUVANTS

MIRAGE 3 SL
 ACTIVATOR 90 100 LIQ
 AG DYNAMICS 2 100 LIQ
 AQUAGENE 90 100 LIQ
 CHOICE 100 LIQ
 LI 129 100 LIQ
 LI 700 100 LIQ
 LI 810 100 LIQ
 TRADITION 93 100 LIQ

WEEDS

COCKLEBUR, COMMON
 FOXTAIL, GIANT
 MORNINGGLORY, SPECIES
 RAGWEED, COMMON
 VELVETLEAF
 WATERHEMP, COMMON

CROP

SOYBEAN

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Glyphosate Surfactant Comparison in Soybean.

Project Code: 00-6A-E50 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.
2. XANST	COCKLEBUR, COMMON	XANTHIUM STRUMARIUM L.
3. AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
4. ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDICUS
5. IPOSS	MORNINGGLORY, SPECIES	IPOMOEA SP.
6. AMATA	WATERHEMP, COMMON	AMARANTHUS RUDIS SAUER

Crop 1: GLXMA SOYBEAN
 Planting Method: SEED
 Rate: 75 LB/A
 Row Spacing: 30 IN

Variety: B-T 369CR
 Planting Date: May-11-00
 Depth: 1.0 IN

Plot Width, Unit: 10 FT
 Tillage Type: REDUCED-TILL
 Previous Crop, Year: ZEAMX, 1999

Plot Length, Unit: 25 FT
 Study Design: RCB
 Fertilizer applied: N 0 LB/A, P₂O₅ 0 LB/A, K₂O 0 LB/A

Soil Name: STGY
 Texture: SILT LOAM

% OM: 2.2
 P₁: 82 LB/A, pH: 5.8
 K: 358 LB/A

CEC: 7

APPLICATION DESCRIPTION

A
 Application Date: Jun-12-00
 Time of Day: 11:30
 Application Method: SPRAY
 Application Timing: 6"W
 Applic. Placement: BROFOL
 Air Temp., Unit: 82 F
 % Relative Humidity: 70
 Wind Velocity, Unit: 4-6 MPH
 Dew Presence (Y/N): N
 Soil Moisture: DRY
 % Cloud Cover: 25

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: GLXMA V2
 Height, Unit: 6-8 IN

WEED STAGE AT EACH APPLICATION

A
 Weed 1 Code: SETFA
 Stage(leaves): 4-5
 Height(inches): 6-7
 Density: HIGH

Weed 2 Code: XANST
 Stage(leaves): 6-8
 Height(inches): 6-9
 Density: HIGH

Weed 3 Code: AMBEL
 Stage(leaves): 4-6
 Height(inches): 4-6
 Density: LOW

Weed 4 Code: ABUTH
 Stage(leaves): 3-5
 Height(inches): 2-5
 Density: LOW

Weed 5 Code: IPOSS
 Stage(leaves): COTLL-3
 Height(inches): 1-3
 Density: LOW

Weed 6 Code: AMATA
 Stage(leaves): 5-8
 Height(inches): 3-6
 Density: MEDIUM

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO₂ SPRAY
 Operating Pressure: 40 PSI
 Nozzle Type: FLAT FAN
 Nozzle Size: XR8002VS
 Boom Length, Unit: 7.33 FT
 Spray Volume, Unit: 15 GPA

NOTES:

Not harvested.

TABLE. GLYPHOSATE SURFACTANT COMPARISON IN SOYBEAN. PROJECT CODE:00-6A-E50

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	GLXMA INJURY		CONTROL, DAYS AFTER 6"W												
							DA 6"W		SETFA		XANST		AMBEL		ABUTH		IPOSS		AMATA		
							14	28	14	28	14	28	14	28	14	28	14	28	14	28	
							%	%	%	%	%	%	%	%	%	%	%	%	%		
1 NONTREATED							0	0	0	0	0	0	0	0	0	0	0	0	0		
2 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	87	98	88	75	77	83	53	58	53	63	57	62
2 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
3 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	83	93	91	73	73	80	43	58	50	62	47	53
3 LI 700	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
3 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
4 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	85	95	92	78	85	85	47	68	50	67	43	70
4 LI 810	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
4 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
5 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	89	96	93	77	85	82	50	70	50	67	57	70
5 LI 129	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
5 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
6 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	78	98	89	78	82	82	43	68	47	65	43	67
6 AQUAGENE 90	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
6 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
7 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	77	86	82	72	82	88	50	63	50	63	43	63
7 TRADITION 93	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
7 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
8 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	88	96	88	78	80	85	43	68	53	72	53	70
8 AG DYNAMICS 2	100 LIQ	1.0	% V/V	1.0	%V/V	6"W	A														
8 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
9 MIRAGE	3 SL	0.38	LB AE/A	1.0	PT/A	6"W	A	0	0	83	93	87	70	78	80	50	65	47	63	47	68
9 ACTIVATOR 90	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
9 CHOICE	100 LIQ	0.5	% V/V	0.5	%V/V	6"W	A														
LSD							0	0	6	11	7	9	17	15	12	19	7	13	11	15	
P							1.0	1.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	

1. PROTOCOL: UAP.

2. RATING DATES:

14 DA 6"W, AND 28 DA 6"W ON JUN-28-00, AND JUL-12-00, RESPECTIVELY.