

Glyphosate Adjuvant Study - UAP/Loveland.

Project Code: 04-24B-E60 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: 8-23-04

Objective:

Evaluation of adjuvants for replacement of AMS and NIS with unloaded glyphosates for weed control in Roundup Ready soybeans.

Weed Code	Common Name	Scientific Name
1. GGGAN	grasses, annual	
2. CYPES	nutsedge, yellow	Cyperus esculentus L.
3. AMBTR	ragweed, giant	Ambrosia trifida L.
4. AMATA	waterhemp, common	Amaranthus rudis Sauer
5. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.
6. SETFA	foxtail, giant	Setaria faberi Herrm.
7. PANDI	panicum, fall	Panicum dichotomiflorum Michx.

Crop 1:	GLXMA soybean	Variety:	AG 4403 RR
Planting Method:	Seeded	Planting Date:	6-7-04
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:	GLXMA, 2003				

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 100 LB/A and 2 ton/A lime

Soil Name:	Rushville	% OM:	2.3	pH:	6	CEC:	12
Texture:	Silt loam	Fert. Level:	P1: 83 LB/A, K: 446 LB/A				

APPLICATION DESCRIPTION

APPLICATION DESCRIPTION		A
Application Date:	7-9-04	
Time of Day:	15:30	
Application Method:	Spray	
Application Timing:	8-12"W	
Applic. Placement:	BROFOL	
Air Temp., Unit:	89 F	
% Relative Humidity:	60	
Wind Velocity, Unit:	2 MPH	
Soil Moisture:	ABONOR	

CROP STAGE AT EACH APPLICATION

CROP STAGE AT EACH APPLICATION		A
Crop 1 Code, Stage:	GLXMA V4	
Height, Unit:	6-8 IN	

WEED STAGE AT EACH APPLICATION

WEED STAGE AT EACH APPLICATION		A
Weed 1 Code:	GGGAN	
Stage(leaves):	5-10	
Height(inches):	8-12	
Density:	Medium	
Weed 2 Code:	CYPES	
Stage(leaves):	5-8	
Height(inches):	8-14	
Density:	Medium	
Weed 3 Code:	AMBTR	
Stage(leaves):	8-10	
Height(inches):	9-13	
Density:	High	

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Weed 4 Code: AMATA
 Stage(leaves): 6-18
 Height(inches): 4-11
 Density: High

Weed 5 Code: IPOHE
 Stage(leaves): 6-12
 Height(inches): 4-12
 Density: Low

APPLICATION EQUIPMENT

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

NOTES:

Southern Illinois University

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Weed Code																					
Crop Code																					
Rating Data Type																					
Rating Unit																					
Rating Date																					
Trt-Eval Interval																					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Injury Percent 7-23-04 14 DA-A	GLXMA Injury Percent 8-6-04 28 DA-A	GGGAN Control Percent 7-23-04 14 DA-A	GGGAN Control Percent 8-6-04 28 DA-A	CYPES Control Percent 7-23-04 14 DA-A	CYPES Control Percent 8-6-04 28 DA-A	AMBTR Control Percent 7-23-04 14 DA-A	AMBTR Control Percent 8-6-04 28 DA-A	AMATA Control Percent 7-23-04 14 DA-A	AMATA Control Percent 8-6-04 28 DA-A	IPOHE Control Percent 7-23-04 14 DA-A	IPOHE Control Percent 8-6-04 28 DA-A
1	MIRAGE	3	SL	0.75	LB AE/A	32	FL OZ/A	8-12"W	A	0	0	99	99	70	77	98	97	93	92	93	92
1	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	8-12"W	A												
1	LIBERATE	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"W	A												
2	MIRAGE	3	SL	0.75	LB AE/A	32	FL OZ/A	8-12"W	A	0	0	99	99	55	68	94	92	91	88	89	88
2	LI 167	100	LIQ	0.5	% V/V	0.5	% V/V	8-12"W	A												
3	MIRAGE	3	SL	0.75	LB AE/A	32	FL OZ/A	8-12"W	A	0	0	99	99	60	73	93	90	94	95	89	93
3	LI 167	100	LIQ	0.75	% V/V	0.75	% V/V	8-12"W	A												
4	MIRAGE	3	SL	0.75	LB AE/A	32	FL OZ/A	8-12"W	A	0	0	99	99	68	68	93	87	96	95	94	85
4	LI 167	100	LIQ	1.0	% V/V	1	% V/V	8-12"W	A												
5	MIRAGE	3	SL	0.75	LB AE/A	32	FL OZ/A	8-12"W	A	0	0	99	99	65	72	97	93	93	95	88	90
5	BLENDBMASTER	100	LIQ	1.0	% V/V	1	% V/V	8-12"W	A												
6	MIRAGE	3	SL	0.375	LB AE/A	16	FL OZ/A	8-12"W	A	0	0	99	99	53	68	86	87	70	75	73	75
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	8-12"W	A												
6	LIBERATE	100	LIQ	0.25	% V/V	0.25	% V/V	8-12"W	A												
7	MIRAGE	3	SL	0.375	LB AE/A	16	FL OZ/A	8-12"W	A	0	0	99	99	60	63	86	72	82	63	82	70
7	LI 167	100	LIQ	0.5	% V/V	0.5	% V/V	8-12"W	A												
8	MIRAGE	3	SL	0.375	LB AE/A	16	FL OZ/A	8-12"W	A	0	0	99	99	55	65	83	77	63	67	73	70
8	LI 167	100	LIQ	0.75	% V/V	0.75	% V/V	8-12"W	A												
9	MIRAGE	3	SL	0.375	LB AE/A	16	FL OZ/A	8-12"W	A	0	0	99	99	60	62	85	78	82	78	84	77
9	LI 167	100	LIQ	1.0	% V/V	1	% V/V	8-12"W	A												
10	MIRAGE	3	SL	0.375	LB AE/A	16	FL OZ/A	8-12"W	A	0	0	99	99	65	70	86	75	76	65	83	82
10	BLENDBMASTER	100	LIQ	1.0	% V/V	1	% V/V	8-12"W	A												
11	MIRAGE	3	SL	0.75	LB AE/A	32	FL OZ/A	8-12"W	A	0	0	99	99	70	75	96	92	96	88	90	75
12	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0
LSD (P=.05)										0.0	0.0	0.0	0.0	7.1	7.7	3.8	8.0	9.7	11.9	6.9	15.2
Replicate F										0.000	0.000	0.000	0.000	1.214	18.690	1.761	6.436	0.617	0.778	2.366	0.009
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	0.3163	0.0001	0.1952	0.0063	0.5487	0.4715	0.1173	0.9915
Treatment F										0.000	0.000	0.000	0.000	59.826	60.653	431.298	89.381	65.725	42.644	117.537	23.024
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: United Agra Products / Loveland.
2. Ratings: CI and WC 14 and 28 DAT.
3. DA-A = Days after 8-12"W application.
4. GGGAN = Annual grasses including SETFA and PANDI.