

## Drift Control Agents with Glyphosate.

Project Code: 03-21S-MMW80      Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country:            Belleville            IL 62221 USA  
 Trial Status: Final                    Updated:            10-28-03

**Objective:**

Evaluate various drift control agents with glyphosate in soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
3. ABUTH	velvetleaf	Abutilon theophrasti Medicus
4. XANST	cocklebur, common	Xanthium strumarium L.
5. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.

Crop 1:                    GLXMA soybean                    Variety:                    Asgrow 4403 RR  
 Planting Method: Seeded                    Planting Date: 6-5-03  
 Rate:                    75            lb/A                    Depth:                    1.0    IN  
 Row Spacing:                    30    IN

Plot Width, Unit: 10            FT                    Plot Length, Unit: 30            FT            Reps: 3  
 Tillage Type:                    Reduced-Till                    Study Design: Randomized complete block  
 Previous Crop, Year: ZEAMX, 2002

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name: Ebbert                    % OM: 1.4            pH: 5.7            CEC: 14  
 Texture:    Silt loam                    Fert. Level:    P1: 97 LB/A, K: 291 LB/A

**APPLICATION DESCRIPTION**

**A**

Application Date:            7-15-03  
 Time of Day:                    12:00  
 Application Method:            Spray  
 Application Timing:            6-8"W  
 Applic. Placement:            BROFOL  
 Air Temp., Unit:                86    F  
 % Relative Humidity:            68  
 Wind Velocity, Unit:            5            MPH  
 Dew Presence (Y/N):            N  
 Soil Moisture:                    BELNOR  
 % Cloud Cover:                    90

**CROP STAGE AT EACH APPLICATION**

**A**

Crop 1 Code, Stage:            GLXMA V5  
 Height, Unit:                    12            IN

**WEED STAGE AT EACH APPLICATION**

**A**

Weed 1 Code:                    SETFA  
 Stage(leaves):                4-8  
 Height(inches):                6-12  
 Density:                        High

Weed 2 Code:                    AMBEL  
 Stage(leaves):                8-12  
 Height(inches):                6-14  
 Density:                        Medium

Weed 3 Code:                    ABUTH  
 Stage(leaves):                4-8  
 Height(inches):                6-10  
 Density:                        Medium

Weed 4 Code: XANST  
Stage(leaves): 6-10  
Height(inches): 7-14  
Density: High

Weed 5 Code: IPOHE  
Stage(leaves): 3-7  
Height(inches): 6-8  
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:  
Not harvested.

Drift Control Agents with Glyphosate.

Project Code: 03-21S-MMW80 Location: Belleville Research Center

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Injury Percent 7-29-03 14 DA-A	GLXMA Injury Percent 8-12-03 28 DA-A	SETFA Control Percent 7-29-03 14 DA-A	SETFA Control Percent 8-12-03 28 DA-A	AMBEL Control Percent 7-29-03 14 DA-A	AMBEL Control Percent 8-12-03 28 DA-A	ABUTH Control Percent 7-29-03 14 DA-A	ABUTH Control Percent 8-12-03 28 DA-A	XANST Control Percent 7-29-03 14 DA-A	XANST Control Percent 8-12-03 28 DA-A	IPOHE Control Percent 7-29-03 14 DA-A	IPOHE Control Percent 8-12-03 28 DA-A
-----------	-----------	------------------	-------------	-------------	-------------------	--	--	---	---	---	---	---	---	---	---	---	---

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	0	0	99	99	97	96	48	55	99	99	42	62
1	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	97	96	48	55	99	99	42	62
2	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	98	43	57	99	99	40	53
2	PLACEMENT	100	LIQ	5.5	FL OZ/A	5.5	FL OZ/A	6-8"	W A												
2	PREMIXED																				
3	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	96	42	47	99	99	42	50
3	PLACEMENT PROPAK	100	LIQ	1.0	% V/V	1	% V/V	6-8"	W A												
3	PREMIXED																				
4	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	43	67	99	98	43	62
4	CORRAL AMS LIQUID	100	LIQ	2.5	% V/V	2.5	% V/V	6-8"	W A												
5	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	96	43	62	99	98	43	62
5	N-PAK AMS	100	LIQ	2.5	% V/V	2.5	% V/V	6-8"	W A												
6	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	42	62	99	99	40	60
6	PLACEMENT	100	LIQ	5.5	FL OZ/A	5.5	FL OZ/A	6-8"	W A												
6	PREMIXED																				
6	N-PAK AMS	100	LIQ	2.5	% V/V	2.5	% V/V	6-8"	W A												
7	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	43	60	99	99	40	60
7	AG 02013	100	LIQ	5.5	FL OZ/A	5.5	FL OZ/A	6-8"	W A												
7	PREMIXED																				
8	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	48	58	99	99	42	57
8	AG 02013	100	LIQ	5.5	FL OZ/A	5.5	FL OZ/A	6-8"	W A												
8	PREMIXED																				
8	N-PAK AMS	100	LIQ	2.5	% V/V	2.5	% V/V	6-8"	W A												
9	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	97	38	50	99	99	42	52
9	AG 02056	100	LIQ	5.5	FL OZ/A	5.5	FL OZ/A	6-8"	W A												
9	PREMIXED																				
10	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	99	43	77	99	99	42	60
10	AG 02056	100	LIQ	5.5	FL OZ/A	5.5	FL OZ/A	6-8"	W A												
10	PREMIXED																				
10	N-PAK AMS	100	LIQ	2.5	% V/V	2.5	% V/V	6-8"	W A												
11	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	98	38	56	99	99	40	52
11	AG 02002	100	DRY	10	LB/100 GAL	10	LB/100 GAL	6-8"	W A												
12	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	97	38	57	99	99	40	60
12	AG 01040	100	DRY	10	LB/100 GAL	10	LB/100 GAL	6-8"	W A												

Weed Code	GLXMA	GLXMA	SETFA	SETFA	AMBEL	AMBEL	ABUTH	ABUTH	XANST	XANST	IPOHE	IPOHE
Crop Code	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	7-29-03	8-12-03	7-29-03	8-12-03	7-29-03	8-12-03	7-29-03	8-12-03	7-29-03	8-12-03	7-29-03	8-12-03
Rating Date	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	14 DA-A	28 DA-A
Trt-Eval Interval												

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
13	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	96	42	52	99	99	42	53
13	AG 02062	100	DRY	10	LB/100 GAL	10	LB/100 GAL	6-8"	W A												
14	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	47	57	99	99	43	57
14	PLACEMENT PROPAK	100	LIQ	1.0	% V/V	1	% V/V	6-8"	W A												
14	ALLIANCE	100	LIQ	1.0	% V/V	1	% V/V	6-8"	W A												
14	PREMIXED																				
15	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	97	42	47	99	99	42	52
15	DRI GARD	100	DRY	9	LB/100 GAL	9	LB/100 GAL	6-8"	W A												
16	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	97	38	38	99	99	42	52
16	FORMULA 1	100	LIQ	2.0	QT/100 GAL	2	QT/100 GAL	6-8"	W A												
17	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	98	43	42	99	99	42	53
17	FORMULA 1	100	LIQ	3.0	QT/100 GAL	3	QT/100 GAL	6-8"	W A												
18	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	98	98	57	72	99	99	42	60
18	AMSOL PLUS	100	LIQ	5.0	% V/V	5	% V/V	6-8"	W A												
19	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	47	52	99	99	40	57
19	DOUBLE DOWN	100	LIQ	2.5	% V/V	2.5	% V/V	6-8"	W A												
20	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	55	63	99	99	43	58
20	AMS 2000	100	DRY	17	LB/100 GAL	17	LB/100 GAL	6-8"	W A												
21	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	6-8"	W A	0	0	99	99	99	99	55	63	99	99	42	58
21	AMS 20/10	100	DRY	10	LB/100 GAL	10	LB/100 GAL	6-8"	W A												
22	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0
	LSD (P=.05)			0.0		0.0				0.0	0.0	0.0	0.0	2.0	3.4	6.1	13.6	0.0	1.0	4.8	6.3
	Replicate F			0.000		0.000				0.000	0.000	0.000	0.000	1.992	0.097	0.007	3.417	0.000	0.594	0.594	1.652
	Replicate Prob(F)			1.0000		1.0000				1.0000	1.0000	1.0000	1.0000	0.1494	0.9074	0.9931	0.0424	1.0000	0.5570	0.5570	0.2041
	Treatment F			0.000		0.000				0.000	0.000	0.000	0.000	919.695	300.664	26.018	10.079	0.000	4019.218	28.788	32.818
	Treatment Prob(F)			1.0000		1.0000				1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Drift Control Agents with Glyphosate.

Project Code: 03-21S-MMW80      Location: Belleville Research Center

#### Trial Comments

1. Protocol: Agrilience, Van Diest, United Suppliers.
2. Ratings: CI and WC at 14 and 28 DAT.
3. Premix adjuvants with glyphosate when adjuvants are listed before "PREMIXED".
4. DA-A = days after 6-8"W application.