

## Carrier Volume by Adjuvant Study.

Project Code: 04-52-M60      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:

Determine if carrier volume influences the performance of adjuvants applied with glyphosate.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. XANST	cocklebur, common	Xanthium strumarium L.
3. AMBTR	ragweed, giant	Ambrosia trifida L.
4. AMATA	waterhemp, common	Amaranthus rudis Sauer
5. ABUTH	velvetleaf	Abutilon theophrasti Medicus

Crop 1:                    GLXMA soybean                    Variety:            AG 4403 RR  
 Planting Method: Seeded                    Planting Date: 6-11-04  
 Rate:                    75      lb/A                    Depth:            1.0      IN  
 Row Spacing:            30      IN

Plot Width, Unit: 10      FT                    Plot Length, Unit: 25      FT      Reps: 3  
 Tillage Type:      Reduced-Till                    Study Design: Randomized complete block  
 Previous Crop, Year: ZEAMX, 2003

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Name: Weir                    % OM: 2.2      pH: 6.9      CEC: 9  
 Texture:      Silt loam                    Fert. Level:      P1: 107 LB/A, K: 420 LB/A

## APPLICATION DESCRIPTION

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Application Date:      7-12-04  
 Time of Day:            13:00  
 Application Method:      Spray  
 Application Timing:      8-10"W  
 Applic. Placement:      BROFOL  
 Air Temp., Unit:        88      F  
 % Relative Humidity:      60  
 Wind Velocity, Unit:      3      MPH  
 Soil Moisture:            NORMAL

## CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:      GLXMA V3  
 Height, Unit:            9-10      IN

## WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:            SETFA  
 Stage(leaves):          6-10  
 Height(inches):        6-7  
 Density:                High

Weed 2 Code:            XANST  
 Stage(leaves):          7-8  
 Height(inches):        8-9  
 Density:                Medium

Weed 3 Code:            AMBTR  
 Stage(leaves):          5-8  
 Height(inches):        8-14  
 Density:                Medium

Weed 4 Code:            AMATA  
 Stage(leaves):          8-10  
 Height(inches):        7-9  
 Density:                High



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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 7-26-04 14 DA-A	GLXMA Injury Percent 8-9-04 28 DA-A	SETFA Control Percent 7-26-04 14 DA-A	SETFA Control Percent 8-9-04 28 DA-A	XANST Control Percent 7-26-04 14 DA-A	XANST Control Percent 8-9-04 28 DA-A	AMBTR Control Percent 7-26-04 14 DA-A	AMBTR Control Percent 8-9-04 28 DA-A	AMATA Control Percent 7-26-04 14 DA-A	AMATA Control Percent 8-9-04 28 DA-A	ABUTH Control Percent 7-26-04 14 DA-A	ABUTH Control Percent 8-9-04 28 DA-A
1	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0
2	8 GPA									0	0	99	94	97	97	55	75	88	93	38	35
2	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
2	BORDER XTRA 8L	100	LIQ	2.5	% V/V	2.5	% V/V	8-10"	A												
3	8 GPA									0	0	98	96	98	99	63	82	83	88	28	32
3	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
3	PX710P	100	LIQ	0.5	% V/V	0.5	% V/V	8-10"	A												
4	8 GPA									0	0	99	97	98	99	77	88	87	92	30	32
4	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
4	PX710P	100	LIQ	1.0	% V/V	1	% V/V	8-10"	A												
5	8 GPA									0	0	99	97	98	98	75	92	85	88	35	35
5	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
5	AMS	100	DRY	1	% W/W	8.5	LB/100 GAL	8-10"	A												
6	8 GPA									0	0	99	98	99	98	80	93	92	91	37	40
6	GLY STAR ORIGINAL	3	SL	0.375	LB AE/A	16	FL OZ/A	8-10"	A												
6	PX7143	100	DRY	0.24	% W/W	2.0	LB/100 GAL	8-10"	A												
6	AMS	100	DRY	1	% W/W	8.5	LB/100 GAL	8-10"	A												
7	11.5 GPA									0	0	99	97	95	97	68	83	87	93	38	39
7	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
7	BORDER XTRA 8L	100	LIQ	2.5	% V/V	2.5	% V/V	8-10"	A												
8	11.5 GPA									0	0	99	98	94	96	58	78	88	88	28	23
8	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
8	PX710P	100	LIQ	0.5	% V/V	0.5	% V/V	8-10"	A												
9	11.5 GPA									0	0	99	98	97	99	68	85	86	91	33	33
9	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
9	PX710P	100	LIQ	1.0	% V/V	1	% V/V	8-10"	A												
10	11.5 GPA									0	0	99	97	96	98	72	87	87	93	40	38
10	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
10	AMS	100	DRY	1	% W/W	8.5	LB/100 GAL	8-10"	A												
11	11.5 GPA									0	0	99	98	98	99	78	92	89	94	48	43
11	GLY STAR ORIGINAL	3	SL	0.375	LB AE/A	16	FL OZ/A	8-10"	A												
11	PX7143	100	DRY	0.24	% W/W	2.0	LB/100 GAL	8-10"	A												
11	AMS	100	DRY	1	% W/W	8.5	LB/100 GAL	8-10"	A												
12	15 GPA									0	0	99	96	95	97	67	84	87	90	37	38
12	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
12	BORDER XTRA 8L	100	LIQ	2.5	% V/V	2.5	% V/V	8-10"	A												
13	15 GPA									0	0	98	97	93	98	58	65	83	88	32	33
13	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	A												
13	PX710P	100	LIQ	0.5	% V/V	0.5	% V/V	8-10"	A												

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
14	15 GPA									0	0	99	98	96	98	72	83	92	90	38	35
14	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	W A												
14	PX710P	100	LIQ	1.0	% V/V	1	% V/V	8-10"	W A												
15	15 GPA									0	0	99	97	98	98	72	94	87	91	45	42
15	ROUNDUP W-MAX	4.5	SL	0.375	LB AE/A	10.7	FL OZ/A	8-10"	W A												
15	AMS	100	DRY	1	% W/W	8.5	LB/100 GAL	8-10"	W A												
16	15 GPA									0	0	99	98	98	98	73	92	94	92	47	43
16	GLY STAR ORIGINAL	3	SL	0.375	LB AE/A	16	FL OZ/A	8-10"	W A												
16	PX7143	100	DRY	0.24	% W/W	2.0	LB/100 GAL	8-10"	W A												
16	AMS	100	DRY	1	% W/W	8.5	LB/100 GAL	8-10"	W A												
LSD (P=.05)										0.0	0.0	0.6	2.4	4.8	2.9	8.4	9.2	4.5	4.7	8.1	6.7
Replicate F										0.000	0.000	0.630	1.146	1.351	0.989	8.189	6.329	1.144	3.346	1.537	1.615
Replicate Prob(F)										1.0000	1.0000	0.5395	0.3318	0.2748	0.3840	0.0015	0.0052	0.3326	0.0493	0.2326	0.2163
Treatment F										0.000	0.000	13872.549	892.838	217.389	615.523	41.865	49.842	200.809	200.475	15.543	20.100
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Precision Labs.
2. Ratings: CI and WC 14 and 28 DAT.
3. Mix amounts are per GPA, see treatment list.  
Change application speed per GPA, use XR11001 nozzles and 40 PSI for all treatments.
4. DA-A = Days after 8-10"W application.