

## Weed Management in Roundup Ready Soybeans.

Project Code: 03-2A-MW50      Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country:      Belleville      IL 62221 USA  
 Trial Status: Final      Updated:      10-27-03

## Objective:

Evaluate weed management programs in Roundup Ready soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. POLPY	smartweed, Pennsylvania	Polygonum pensylvanicum L.
3. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

Crop 1:                    GLXMA soybean                    Variety:                    AG 4403 RR  
 Planting Method: Seeded                    Planting Date: 6-20-03  
 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, 2002

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

Soil Name: Weir                    % OM: 1.5      pH: 6.4      CEC: 10  
 Texture:      Silt loam                    Fert. Level:      P1: 81 LB/A, K: 274 LB/A

## APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	6-9-03	7-10-03	7-10-03	7-28-03
Time of Day:	12:30	19:00	19:00	12:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	4-6"W-1	4-6"W-2	2-4"RG
Applic. Placement:	BROS0I	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	80      F	86      F	86      F	80      F
% Relative Humidity:	34	42	42	76
Wind Velocity, Unit:	0-5      MPH	5      MPH	5      MPH	3      MPH
Soil Moisture:	NORMAL	ABONOR	ABONOR	NORMAL

## CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GLXMA NA	GLXMA V2	GLXMA V2	GLXMA V4
Height, Unit:	NA      NA	5      IN	5      IN	6-10      IN

## WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code:		SETFA		SETFA
Stage(leaves):		4-6		1-2
Height(inches):		4-6		0-1
Density:		High		Medium
Weed 2 Code:		POLPY		
Stage(leaves):		3-5		
Height(inches):		2-4		
Density:		Low		
Weed 3 Code:		AMBEL	AMBEL	
Stage(leaves):		2-8	2-8	
Height(inches):		2-8	2-8	
Density:		High	High	

## APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8003	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA

## NOTES:

Harvested Oct-22-03, (2) 30 inch rows by 25 ft.

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Weed Code						SETFA	SETFA	SETFA	SETFA	POLPY	POLPY	POLPY	POLPY								
Crop Code						GLXMA	GLXMA	GLXMA	GLXMA												
Rating Data Type						Yield	Injury	Injury	Injury	Control	Control	Control	Control								
Rating Unit						bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Date						10-20-03	7-10-03	7-17-03	7-31-03	7-10-03	7-17-03	7-31-03	8-21-03								
Trt-Eval Interval						0 DA-B	7 DA-B	21 DA-B	0 DA-B	7 DA-B	21 DA-B	42 DA-B	0 DA-B								
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
1	NONTREATED									10	0	0	0	0	0	0	0				
2	BOUNDARY	6.5	EC	1.46	LB A/A	1.8	PT/A	PRE	A	35	0	7	0	99	99	98	87				
2	FLEXSTAR	1.88	EC	0.294	LB A/A	20	FL OZ/A	4-6"	W-2 C												
2	DESTINY MSO	100	LIQ	1.0	% V/V	1	% V/V	4-6"	W-2 C												
2	28% UAN	100	LIQ	2.0	% V/V	2	% V/V	4-6"	W-2 C												
3	BOUNDARY	6.5	EC	1.46	LB A/A	1.8	PT/A	PRE	A	35	0	0	0	99	99	98	75				
3	TOUCHDOWN TOTAL	4.17	SC	0.75	LB AE/A	23	FL OZ/A	4-6"	W-2 C												
3	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-2 C												
4	TOUCHDOWN TOTAL	4.17	SC	0.75	LB AE/A	23	FL OZ/A	4-6"	W-1 B	40		0	0	99	99	98					
4	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-1 B								93				
4	TOUCHDOWN TOTAL	4.17	SC	0.75	LB AE/A	23	FL OZ/A	2-4"	RG D								99				
4	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	2-4"	RG D								99				
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	4-6"	W-1 B	36		0	0	99	98	69					
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"	W-1 B								99				
6	AIM	2	EW	0.0039	LB A/A	0.25	FL OZ/A	4-6"	W-1 B	27		7	0	99	99	63					
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	4-6"	W-1 B								99				
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"	W-1 B								99				
7	PENDIMAX	3.3	EC	1.0	LB A/A	2.42	PT/A	PRE	A	38	0	0	0	20	99	99	73				
7	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	1	QT/A	4-6"	W-2 C								0				
7	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-2 C								95				
8	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	1	QT/A	4-6"	W-1 B	40		0	0	99	99	90					
8	FIRSTRATE	84	WG	0.016	LB A/A	0.3	OZ/A	4-6"	W-1 B								96				
8	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-1 B								99				
9	GLYPHOMAX HC	4	SL	0.75	LB AE/A	24	FL OZ/A	4-6"	W-1 B	37		0	0	99	99	97					
9	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-1 B								99				
9	GLYPHOMAX HC	4	SL	0.75	LB AE/A	24	FL OZ/A	2-4"	RG D								99				
9	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	2-4"	RG D								99				
10	BUCCANEER	3	SL	0.75	LB AE/A	32	FL OZ/A	4-6"	W-1 B	36		0	0	99	99	65					
10	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"	W-1 B								99				
LSD (P=.05)										7.3	0.0	2.3	0.0	0.0	0.0	2.2	21.1	2.3	4.9	0.0	0.0
Replicate F										2.420	0.000	0.474	0.000	0.000	0.000	1.000	6.395	1.000	0.252	0.000	0.000
Replicate Prob(F)										0.1173	1.0000	0.6302	1.0000	1.0000	1.0000	0.3874	0.0080	0.4219	0.7800	1.0000	1.0000
Treatment F										13.755	0.000	13.474	0.000	0.000	0.000	1821.965	15.919	7252.750	355.023	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Weed Code	AMBEL	AMBEL	AMBEL	AMBEL
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	7-10-03	7-17-03	7-31-03	8-21-03
Trt-Eval Interval	0 DA-B	7 DA-B	21 DA-B	42 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED									0	0	0	0
2	BOUNDARY	6.5	EC	1.46	LB A/A	1.8	PT/A	PRE	A	0	99	99	99
2	FLEXSTAR	1.88	EC	0.294	LB A/A	20	FL OZ/A	4-6"	W-2 C				
2	DESTINY MSO	100	LIQ	1.0	% V/V	1	% V/V	4-6"	W-2 C				
2	28% UAN	100	LIQ	2.0	% V/V	2	% V/V	4-6"	W-2 C				
3	BOUNDARY	6.5	EC	1.46	LB A/A	1.8	PT/A	PRE	A	0	99	99	99
3	TOUCHDOWN TOTAL	4.17	SC	0.75	LB AE/A	23	FL OZ/A	4-6"	W-2 C				
3	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-2 C				
4	TOUCHDOWN TOTAL	4.17	SC	0.75	LB AE/A	23	FL OZ/A	4-6"	W-1 B		99	99	99
4	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-1 B				
4	TOUCHDOWN TOTAL	4.17	SC	0.75	LB AE/A	23	FL OZ/A	2-4"	RG D				
4	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	2-4"	RG D				
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	4-6"	W-1 B		99	99	99
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"	W-1 B				
6	AIM	2	EW	0.0039	LB A/A	0.25	FL OZ/A	4-6"	W-1 B		99	95	99
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	4-6"	W-1 B				
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"	W-1 B				
7	PENDIMAX	3.3	EC	1.0	LB A/A	2.42	PT/A	PRE	A	0	99	98	99
7	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	1	QT/A	4-6"	W-2 C				
7	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-2 C				
8	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	1	QT/A	4-6"	W-1 B		99	99	99
8	FIRSTRATE	84	WG	0.016	LB A/A	0.3	OZ/A	4-6"	W-1 B				
8	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-1 B				
9	GLYPHOMAX HC	4	SL	0.75	LB AE/A	24	FL OZ/A	4-6"	W-1 B		99	99	99
9	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	4-6"	W-1 B				
9	GLYPHOMAX HC	4	SL	0.75	LB AE/A	24	FL OZ/A	2-4"	RG D				
9	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	2-4"	RG D				
10	BUCCANEER	3	SL	0.75	LB AE/A	32	FL OZ/A	4-6"	W-1 B		99	98	99
10	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"	W-1 B				
LSD (P=.05)										0.0	0.0	1.7	0.0
Replicate F										0.000	0.000	2.250	0.000
Replicate Prob(F)										1.0000	1.0000	0.1342	1.0000
Treatment F										0.000	0.000	3060.004	0.000
Treatment Prob(F)										1.0000	1.0000	0.0001	1.0000

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Trial Comments

1. Protocol: Syngenta, FMC, Dow, and Van Diest.
2. Ratings: CI and WC prior to POST and 7, 21 and 42 DA POST.
3. Yield.
4. DA-B = days after 4-6"W-1 or 4-6"W-2 applications (applied on the same day).
5. Ratings at 0 DA-B were prior to postemergence applications.
6. Ratings at 42 DA-B were also 24 days after the 2-4"RG application.