

Herbicide Programs in Roundup Ready Soybean.

02-10B-E180

OBJECTIVE: Evaluate benefits of utilizing other herbicides with a glyphosate program in Roundup Ready soybean.

SUMMARY: The objective of this study was to evaluate the benefits of utilizing sequential and preemergence herbicides in a Roundup Ready system. No herbicide treatment caused greater than 3% soybean injury. At the July and August evaluation timings, all herbicide programs provided excellent control of giant foxtail and common cocklebur except Boundary alone (87% control on 7/23). Similarly, common ragweed control on July 23 was 99% from all herbicide programs except Touchdown alone (91%) at 3 WAP and FirstRate followed by Glyphomax Plus (82%). Yellow nutsedge control in August was at least 90% from all treatments except Domain followed by Touchdown (58%), and Glyphomax Plus at 1.5 pt alone (87%). The greatest ivyleaf morningglory control was achieved with treatments containing an effective preemergence herbicide (Canopy XL, Ten 5826, and Gauntlet) followed by a glyphosate application or with treatments consisting of two properly timed glyphosate applications. Soybean yield ranged from 23 bu/A in nontreated plots to 53 bu/A. Plots treated with Boundary yielded significantly lower than all other herbicide treated plots. Soybean yield also tended to be lower in plots that received a single application of Glyphomax Plus alone or tank mixed with Aim.

HERBICIDES

AIM 2 EW
 AUTHORITY 75 WG
 BOUNDARY 6.5 EC
 CANOPY XL 56.3 WG
 CLASSIC 25 WG
 DOMAIN 60 WG
 FIRSTRATE 84 WG
 GAUNTLET (CO-PACK)
 GLYPHOMAX PLUS 3 SL
 MON 78270 4.5 SL
 PENDIMAX 3.3 EC
 ROUNDUP ULTRA MAX 3.7 SL
 SIU 2002-H1 4.17 SL
 TEN 5826 75 WG
 TOUCHDOWN 3 SL
 VALOR 51 WG

WEEDS

cocklebur, common
 foxtail, giant
 morningglory, species
 nutsedge, yellow
 ragweed, common

CROP

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Herbicide Programs in Roundup Ready Soybean.

Project Code: 02-10B-E180 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 10-29-02

Objective:

Evaluate benefits of utilizing other herbicides with a glyphosate program in Roundup Ready soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. XANST	cocklebur, common	Xanthium strumarium L.
3. IPOSS	morningglory, species	Ipomoea sp.
4. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
5. CYPES	nutsedge, yellow	Cyperus esculentus L.

Crop 1: GLXMA soybean Variety: Asgrow 4602 RR
 Planting Method: Seeded Planting Date: 6-4-02
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 24 FT Reps: 3
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: ZEAMX, 2001

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Name: Weir % OM: 1.6 pH: 6.3 CEC: 12
 Texture: Silt loam Fert. Level: P1: 82 LB/A, K: 274 LB/A

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	6-4-02	6-25-02	6-27-02	6-27-02	7-9-02	7-16-02
Time of Day:	15:00	10:00	11:30	11:30	17:30	8:40
Application Method:	Spray	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	3WAP	4-8"W	4-6"W	5WAP	6WAP
Applic. Placement:	BROSOI	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	92 F	86 F	88 F	88 F	98 F	74 F
% Relative Humidity:	52	86	50	50	40	70
Wind Velocity, Unit:	5-10 MPH	0 MPH	3-5 MPH	3-5 MPH	3-5 MPH	0-3 MPH
Soil Moisture:	NORMAL	NORMAL	BELNOR	BELNOR	BELNOR	BELNOR

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Crop 1 Code, Stage:	GLXMA NA	GLXMA V1	GLXMA V2	GLXMA V2	GLXMA V4	GLXMA V6-R1
Height, Unit:	NA NA	4 IN	6 IN	6 IN	10 IN	12-14 IN

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Weed 1 Code:		SETFA	SETFA	SETFA	SETFA	
Stage (leaves):		3-6	5-6	4-7	4-8	
Height (inches):		3-6	4-7	2-7	6-12	
Density:		High	High	High	Low	
Weed 2 Code:		XANST	XANST	XANST	XANST	
Stage (leaves):		3-5	4-6	2-6	8-16	
Height (inches):		3-5	4-8	3-7	8-14	
Density:		Low	Low	Low	Low	
Weed 3 Code:		IPOSS	IPOSS	IPOSS	IPOSS	IPOSS
Stage (leaves):		3-5	3-7	0-5	12-24	2-10
Height (inches):		3-5	3-7	1-5	10-24	2-8
Density:		Low	Low	Low	Low	Low
Weed 4 Code:		AMBEL	AMBEL	AMBEL	AMBEL	AMBEL
Stage (leaves):		4-6	4-8	4-7	6-10	2-4
Height (inches):		3-5	3-6	1-4	6-12	1-3
Density:		Medium	Low	Low	Low	Low

Weed 5 Code:	CYPES	CYPES	CYPES	CYPES	CYPES
Stage(leaves):	5-8	3-8	7-10	8-14	4-8
Height(inches):	3-6	3-8	4-8	6-12	4-8
Density:	Medium	Medium	Medium	Low	Low

APPLICATION EQUIPMENT

	A	B	C	D	E	F
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8003	8002	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

NOTES:

Harvested Oct-23-02, (2) 30 inch rows by 21 ft.

Herbicide Programs in Roundup Ready Soybean.

Project Code: 02-10B-E180 Location: Belleville Research Center

Weed Code	GLXMA	GLXMA	GLXMA	GLXMA	SETFA	SETFA	SETFA	XANST	XANST	XANST	IPOSS	IPOSS	IPOSS
Crop Code	Yield	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	10-23-02	6-24-02	7-2-02		10-23-02	6-24-02	7-23-02	8-20-02	7-23-02	8-20-02	7-23-02	8-20-02	8-20-02
Rating Date	14 DAE	At Post	28 DAE		At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B
Trt-Eval Interval													

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Yield	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	
1	NONTREATED									23	0		0	0	0		0	0		0	0		0	
2	BOUNDARY	6.5	EC	1.22	LB A/A	1.5	PT/A	PRE	A	27	1		0	87	90		0	0		0	0		0	
3	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	3WAP	B	49			0	99	99		99	99		99	99		88	92
3	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B															
4	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E	46				99	99		99	99		99	99		75	75
4	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E															
5	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	3WAP	B	47		0	0	99	99	99	99	99	99	99	99	87	92	92
5	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B															
5	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	6WAP	F															
5	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F															
6	BOUNDARY	6.5	EC	1.22	LB A/A	1.5	PT/A	PRE	A	53	3	3	0	99	99	99	99	99	99	99	99	0	88	87
6	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	3WAP	B															
6	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B															
7	BOUNDARY	6.5	EC	1.22	LB A/A	1.5	PT/A	PRE	A	46	2	0	0	98	99	99	99	99	99	99	99	0	0	0
7	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E															
7	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E															
8	CANOPY XL	56.3	WG			3.5	OZ/A	PRE	A	53	0	0	0	0	99	99	99	99	99	99	99	75	93	93
8	->CLASSIC	25	WG	0.0205	LB A/A			PRE	A															
8	->AUTHORITY	75	WG	0.103	LB A/A			PRE	A															
8	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E															
8	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E															
9	DOMAIN	60	WG	0.375	LB A/A	10	OZ/A	PRE	A	51	0	0	0	95	99	99	99	99	99	99	99	0	3	0
9	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E															
9	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E															
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	3WAP	B	52		0	0	99	99	99	99	99	99	99	99	87	91	88
10	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B															
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	6WAP	F															
10	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F															
11	SIU 2002-H1	4.17	SL	0.75	LB AE/A	23	OZ/A	3WAP	B	49			0	99	99	99	99	99	99	99	99		90	85
11	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B															

Weed Code																			
Crop Code																			
Rating Data Type																			
Rating Unit																			
Rating Date																			
Trt-Eval Interval																			
		GLXMA	GLXMA	GLXMA	GLXMA	SETFA	SETFA	SETFA	XANST	XANST	XANST	IPOSS	IPOSS	IPOSS					
		Yield	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control					
		bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent					
		10-23-02	6-24-02	7-2-02	7-2-02	At Post	7-23-02	8-20-02	At Post	7-23-02	8-20-02	At Post	7-23-02	8-20-02					
			14 DAE	At Post	28 DAE	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
12	SIU 2002-H1	4.17	SL	0.75	LB AE/A	23	OZ/A	3WAP	B	52			0		99	99		99	99
12	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B									93	96
12	SIU 2002-H1	4.17	SL	0.75	LB AE/A	23	OZ/A	6WAP	F										
12	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F										
13	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	3WAP	B	50			0		99	99		99	99
13	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B									92	82
14	MON 78270	4.5	SL	0.75	LB AE/A	21.3	OZ/A	3WAP	B	50			0	0	99	99	99	98	98
14	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B									96	78
15	MON 78270	4.5	SL	0.75	LB AE/A	21.3	OZ/A	3WAP	B	49			0	0	99	99	99	99	99
15	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B									85	93
15	MON 78270	4.5	SL	0.75	LB AE/A	21.3	OZ/A	6WAP	F										
15	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F										
16	DOMAIN	60	WG	0.45	LB A/A	12	OZ/A	PRE	A	50	1	0	0	0	98	99	99	27	99
16	ROUNDUP ULTRA MAX	3.7	SL	0.58	LB AE/A	20	OZ/A	4-6"W	D									3	0
16	AMS	100	DRY	2.0	% W/W	2	%W/W	4-6"W	D										0
17	DOMAIN	60	WG	0.525	LB A/A	14	OZ/A	PRE	A	47	0	0	0	0	99	99	99	50	98
17	ROUNDUP ULTRA MAX	3.7	SL	0.58	LB AE/A	20	OZ/A	4-6"W	D										0
17	AMS	100	DRY	2.0	% W/W	2	%W/W	4-6"W	D										0
18	GAUNTLET (CO-PACK)					4.5	OZ/A	PRE	A	52	0	0	0	0	58	99	99	73	99
18	->FIRSTRATE	84	WG	0.023	LB A/A			PRE	A										
18	->AUTHORITY	75	WG	0.19	LB A/A			PRE	A										
18	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D										
18	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D										
18	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D										
19	GAUNTLET (CO-PACK)					5.9	OZ/A	PRE	A	53	0	0	0	0	60	99	99	80	99
19	->FIRSTRATE	84	WG	0.03	LB A/A			PRE	A										
19	->AUTHORITY	75	WG	0.25	LB A/A			PRE	A										
19	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D										
19	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D										
19	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D										
20	PENDIMAX	3.3	EC	1.24	LB A/A	3	PT/A	PRE	A	50	0	0	0	0	93	99	99	0	99
20	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	2	PT/A	4-6"W	D										
20	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D										
21	FIRSTRATE	84	WG	0.0315	LB A/A	0.6	OZ/A	PRE	A	52	0	0	0	0	33	99	99	92	99
21	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D										
21	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D										

Weed Code		SETFA SETFA SETFA XANST XANST XANST IPOSS IPOSS IPOSS																					
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	SETFA	SETFA	SETFA	XANST	XANST	XANST	IPOSS	IPOSS	IPOSS									
Rating Data Type		Yield	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control									
Rating Unit		bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent									
Rating Date		10-23-02	6-24-02	7-2-02	7-2-02	7-23-02	7-23-02	8-20-02	8-20-02	8-20-02	8-20-02	7-23-02	8-20-02	8-20-02									
Trt-Eval Interval		14 DAE	At Post	28 DAE	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B										
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code														
22	PENDIMAX	3.3	EC	1.24	LB A/A	3	PT/A	PRE	A	51	0	0	0	94	99	99	0	99	99	3	83	77	
22	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	4-6"W	D														
22	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D														
22	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D														
22	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D														
23	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	PRE	A	53	0	0	0	63	99	99	20	99	99	0	96	90	
23	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	4-6"W	D														
23	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D														
23	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D														
23	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D														
24	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	4-8"W	C	51			0		99	99			99	99		87	85
24	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-8"W	C														
24	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-8"W	C														
24	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"W	C														
25	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	2	PT/A	4-8"W	C	44			0		99	99			98	98		3	0
25	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"W	C														
26	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-8"W	C	41			0		96	98			99	99		0	0
26	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"W	C														
27	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-8"W	C	42			0		98	99			99	99		7	0
27	AIM	2	EW	0.004	LB A/A	0.256	OZ/A	4-8"W	C														
27	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"W	C														
28	TEN 5826	75	WG	0.14	LB A/A	3	OZ/A	PRE	A	51	0	0	0	38	99	99	3	99	99	30	83	83	
28	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	4-6"W	D														
28	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D														
29	TEN 5826	75	WG	0.187	LB A/A	4	OZ/A	PRE	A	53	0	0	0	70	99	99	13	99	99	70	96	99	
29	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	4-6"W	D														
29	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D														
30	TEN 5826	75	WG	0.234	LB A/A	5	OZ/A	PRE	A	52	0	0	0	60	99	99	3	99	99	92	97	99	
30	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	4-6"W	D														
30	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D														
LSD (P=.05)										8.2	0.9	0.0	0.0	8.8	2.3	0.7	7.9	1.0	1.7	8.3	7.1	9.3	
Replicate F										5.550	0.850	0.000	0.000	4.461	2.851	1.000	1.210	1.467	1.788	0.631	0.172	6.571	
Replicate Prob(F)										0.0062	0.4370	1.0000	1.0000	0.0186	0.0659	0.3741	0.3099	0.2391	0.1764	0.5378	0.8427	0.0027	
Treatment F										5.908	8.805	0.000	0.000	89.082	477.577	5519.474	231.467	4794.557	1797.520	192.997	261.456	149.158	
Treatment Prob(F)										0.0001	0.0001	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	

Weed Code	AMBEL	AMBEL	AMBEL	CYPES	CYPES	CYPES
Crop Code						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-23-02	8-20-02	8-20-02	7-23-02	8-20-02	8-20-02
Trt-Eval Interval	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 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	1.22	LB A/A	1.5	PT/A	PRE	A			0	0		93	95
3	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	3WAP	B			99	99		98	99
3	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							
4	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E			91	91		90	93
4	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E							
5	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	3WAP	B	99	99	99	99	96	99	99
5	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							
5	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	6WAP	F							
5	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F							
6	BOUNDARY	6.5	EC	1.22	LB A/A	1.5	PT/A	PRE	A	0	99	99	72	99	99	99
6	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	3WAP	B							
6	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							
7	BOUNDARY	6.5	EC	1.22	LB A/A	1.5	PT/A	PRE	A	0	99	99	87	95	99	99
7	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E							
7	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E							
8	CANOPY XL	56.3	WG			3.5	OZ/A	PRE	A	50	99	99	96	97	98	98
8	->CLASSIC	25	WG	0.0205	LB A/A			PRE	A							
8	->AUTHORITY	75	WG	0.103	LB A/A			PRE	A							
8	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E							
8	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E							
9	DOMAIN	60	WG	0.375	LB A/A	10	OZ/A	PRE	A	0	99	99	73	83	58	58
9	TOUCHDOWN	3	SL	0.75	LB AE/A	1	QT/A	5WAP	E							
9	AMS	100	DRY	2.0	% W/W	2	%W/W	5WAP	E							
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	3WAP	B	99	99	99	85	90	95	95
10	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	6WAP	F							
10	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F							
11	SIU 2002-H1	4.17	SL	0.75	LB AE/A	23	OZ/A	3WAP	B			99	99		99	99
11	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							
12	SIU 2002-H1	4.17	SL	0.75	LB AE/A	23	OZ/A	3WAP	B			99	99		99	99
12	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							
12	SIU 2002-H1	4.17	SL	0.75	LB AE/A	23	OZ/A	6WAP	F							
12	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F							
13	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	3WAP	B			99	99		98	99
13	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B							

Weed Code	AMBEL	AMBEL	AMBEL	CYPES	CYPES	CYPES
Crop Code						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-23-02	8-20-02	7-23-02	8-20-02		
Trt-Eval Interval	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
14	MON 78270	4.5	SL	0.75	LB AE/A	21.3	OZ/A	3WAP	B	99	99	99	77	93	93
14	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B						
15	MON 78270	4.5	SL	0.75	LB AE/A	21.3	OZ/A	3WAP	B	99	99	99	85	92	95
15	AMS	100	DRY	2.0	% W/W	2	%W/W	3WAP	B						
15	MON 78270	4.5	SL	0.75	LB AE/A	21.3	OZ/A	6WAP	F						
15	AMS	100	DRY	2.0	% W/W	2	%W/W	6WAP	F						
16	DOMAIN	60	WG	0.45	LB A/A	12	OZ/A	PRE	A	90	99	99	18	88	93
16	ROUNDUP ULTRA MAX	3.7	SL	0.58	LB AE/A	20	OZ/A	4-6"W	D						
16	AMS	100	DRY	2.0	% W/W	2	%W/W	4-6"W	D						
17	DOMAIN	60	WG	0.525	LB A/A	14	OZ/A	PRE	A	91	99	99	75	93	96
17	ROUNDUP ULTRA MAX	3.7	SL	0.58	LB AE/A	20	OZ/A	4-6"W	D						
17	AMS	100	DRY	2.0	% W/W	2	%W/W	4-6"W	D						
18	GAUNTLET (CO-PACK)					4.5	OZ/A	PRE	A	78	99	99	92	98	98
18	->FIRSTRATE	84	WG	0.023	LB A/A			PRE	A						
18	->AUTHORITY	75	WG	0.19	LB A/A			PRE	A						
18	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D						
18	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D						
18	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D						
19	GAUNTLET (CO-PACK)					5.9	OZ/A	PRE	A	93	99	99	80	99	99
19	->FIRSTRATE	84	WG	0.03	LB A/A			PRE	A						
19	->AUTHORITY	75	WG	0.25	LB A/A			PRE	A						
19	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D						
19	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D						
19	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D						
20	PENDIMAX	3.3	EC	1.24	LB A/A	3	PT/A	PRE	A	0	99	99	60	93	96
20	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	2	PT/A	4-6"W	D						
20	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D						
21	FIRSTRATE	84	WG	0.0315	LB A/A	0.6	OZ/A	PRE	A	96	82	83	93	96	98
21	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D						
21	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D						
22	PENDIMAX	3.3	EC	1.24	LB A/A	3	PT/A	PRE	A	3	99	99	50	97	99
22	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	4-6"W	D						
22	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D						
22	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D						
22	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D						
23	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	PRE	A	50	99	99	72	96	99
23	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	4-6"W	D						
23	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-6"W	D						
23	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-6"W	D						
23	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"W	D						

Weed Code	AMBEL	AMBEL	AMBEL	CYPES	CYPES	CYPES
Crop Code						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-23-02	8-20-02	8-20-02	7-23-02	8-20-02	8-20-02
Trt-Eval Interval	At Post	28 DA-B	56 DA-B	At Post	28 DA-B	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
24	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	4-8"	W C		99	99		99	99
24	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-8"	W C						
24	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	4-8"	W C						
24	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"	W C						
25	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	2	PT/A	4-8"	W C		99	99		83	92
25	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"	W C						
26	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-8"	W C		99	99		80	87
26	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"	W C						
27	GLYPHOMAX PLUS	3	SL	0.56	LB AE/A	1.5	PT/A	4-8"	W C		99	99		83	92
27	AIM	2	EW	0.004	LB A/A	0.256	OZ/A	4-8"	W C						
27	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-8"	W C						
28	TEN 5826	75	WG	0.14	LB A/A	3	OZ/A	PRE	A	0	99	99	70	96	98
28	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	4-6"	W D						
28	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"	W D						
29	TEN 5826	75	WG	0.187	LB A/A	4	OZ/A	PRE	A	0	99	99	92	95	99
29	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	4-6"	W D						
29	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"	W D						
30	TEN 5826	75	WG	0.234	LB A/A	5	OZ/A	PRE	A	3	99	99	96	97	99
30	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	4-6"	W D						
30	AMS	100	DRY	1.5	% W/W	1.5	%W/W	4-6"	W D						
LSD (P=.05)										7.6	3.1	4.5	10.9	5.7	15.6
Replicate F										1.640	2.068	2.038	0.380	0.343	0.835
Replicate Prob(F)										0.2082	0.1357	0.1395	0.6863	0.7114	0.4390
Treatment F										288.182	541.348	251.096	25.137	78.309	11.830
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Herbicide Programs in Roundup Ready Soybean.

Project Code: 02-10B-E180 Location: Belleville Research Center

Trial Comments

1. Protocol: Syngenta (1-10); Monsanto (10, 13-15); Bayer (16-17); Dow (18-25); FMC (26-27); Rosens (28-30).
2. DAE = days after emergence. At Post = At postemergence application for PRE/POST treatments or at second POST for POST/POST treatments. DA-B = days after 3WAP application.
3. Ratings At Post were also 21, 23, 23, 35, and 42 days after PRE application, respectively.
Ratings At Post were made on 6-25-02, 6-27-02, 6-27-02, 7-9-02, and 7-16-02 for postemergence timings 3WAP, 4-8"W, 4-6"W, 5 WAP, and 6WAP, respectively.
Ratings 28 DA-B were also 49, 26, 26, 14, and 7 days after PRE, 4-8"W, 4-6"W, 5WAP, and 6WAP, respectively.
Ratings 56 DA-B were also 77, 54, 54, 42, and 35 days after PRE, 4-8"W, 4-6"W, 5WAP, and 6WAP, respectively.