

Valor in Glyphosate-Resistant Soybeans.

Project Code: 04-6A-W110 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: 10-14-04

Objective:

Determine the benefits of Valor in glyphosate-resistant soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. XANST	cocklebur, common	Xanthium strumarium L.
3. AMATA	waterhemp, common	Amaranthus rudis Sauer
4. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
5. IPOSS	morningglory, species	Ipomoea sp.
6. ABUTH	velvetleaf	Abutilon theophrasti Medicus

Crop 1: GLXMA soybean Variety: Asgrow 4403 RR
 Planting Method: Seeded Planting Date: 5-13-04
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 25 FT Reps: 5
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: ZEAMX, 2003

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 100 LB/A

Soil Name: Stoy % OM: 1.6 pH: 6.3 CEC: 7
 Texture: Silt loam Fert. Level: P1: 105 LB/A, K: 448 LB/A

APPLICATION DESCRIPTION

	A	B	C
Application Date:	4-29-04	5-17-04	6-17-04
Time of Day:	11:00	8:00	11:00
Application Method:	Spray	Spray	Spray
Application Timing:	14EPP	PRE	12-14"W
Applic. Placement:	BROFOL F	BROFOL F	BROFOL F
Wind Velocity, Unit:	3 MPH	0 MPH	0 MPH
Soil Moisture:	NORMAL	ABONOR	ABONOR

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:		SETFA	SETFA
Stage (leaves):		2-3	5-6
Height (inches):		1-2	10-14
Density:		Medium	High
Weed 2 Code:		XANST	XANST
Stage (leaves):		3-4	10-12
Height (inches):		1-2	6-10
Density:		Medium	Medium
Weed 3 Code:		AMATA	AMATA
Stage (leaves):		2-3	10-20
Height (inches):		0-0.5	10-18
Density:		Medium	Medium
Weed 5 Code:		IPOSS	
Stage (leaves):		2-3	
Height (inches):		1-2	
Density:		Low	

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Weed 6 Code: ABUTH
Stage (leaves): 3-4
Height (inches): 1-2
Density: Low

APPLICATION EQUIPMENT

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

NOTES:

Harvested 10-7-04, (2) 30 inch rows x 22 ft.

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Yield 10-7-04	GLXMA Injury 6-10-04 28 DAP	GLXMA Injury 7-8-04 56 DAP	SETFA Control Percent 6-10-04 -7 DA-C	SETFA Control Percent 7-1-04 14 DA-C	SETFA Control Percent 7-8-04 56 DAP	AMATA Control Percent 6-10-04 -7 DA-C	AMATA Control Percent 7-1-04 14 DA-C	AMATA Control Percent 7-8-04 56 DAP	XANST Control Percent 6-10-04 -7 DA-C	XANST Control Percent 7-1-04 14 DA-C	XANST Control Percent 7-8-04 56 DAP
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Yield	GLXMA Injury	GLXMA Injury	SETFA Control	SETFA Control	SETFA Control	AMATA Control	AMATA Control	AMATA Control	XANST Control	XANST Control	XANST Control
1	ROUNDUP W-MAX 1 NO POST HERBICIDES	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	14	0	0	71	0	0	15	0	0	14	0	0
2	ROUNDUP W-MAX 2 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C	60	0	0	0	99	99	0	98	98	0	99	99
3	ROUNDUP W-MAX 3 VALOR	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	56	0	0	99	98	98	99	99	97	86	99	98
3	ROUNDUP W-MAX 3 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
4	ROUNDUP W-MAX 4 VALOR	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	55	5	0	99	98	98	99	98	98	91	98	98
4	ROUNDUP W-MAX 4 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
5	ROUNDUP W-MAX 5 VALOR	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	52	9	0	99	98	98	99	99	97	93	98	98
5	ROUNDUP W-MAX 5 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
6	ROUNDUP W-MAX 6 VALOR	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	55	3	0	99	98	98	99	99	98	96	98	98
6	FIRSTRATE	84	WG	0.0187	LB A/A	0.356	OZ/A	PRE	B												
6	ROUNDUP W-MAX 6 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
7	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	14EPP	A	57	0	0	83	98	98	97	98	98	0	99	98
7	INTRRO	4	L	1.0	LB A/A	1	QT/A	14EPP	A												
7	ROUNDUP W-MAX 7 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
8	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	14EPP	A	57	0	0	67	99	98	85	98	98	0	99	99
8	ROUNDUP W-MAX 8 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
9	ROUNDUP W-MAX 9 VALOR	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	50	0	0	99	98	98	99	98	98	84	99	98
9	INTRRO	4	L	1.0	LB A/A	1	QT/A	PRE	B												
9	ROUNDUP W-MAX 9 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												
10	ROUNDUP W-MAX 10 VALOR	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	54	0	0	99	99	98	99	99	98	93	98	98
10	CANOPY XL	56.3	WG			1	OZ/A	PRE	B												
10	->CLASSIC	25	WG	0.0058	LB A/A			PRE	B												
10	->AUTHORITY	75	WG	0.0294	LB A/A			PRE	B												
10	ROUNDUP W-MAX 10 AMS	4.5	SL 100 DRY	0.77	LB AE/A 2.0 % W/W	22	FL OZ/A 17 LB/100 GAL	12-14"W	C												

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						bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
						28 DAP	56 DAP	-7 DA-C	14 DA-C	56 DAP	-7 DA-C	14 DA-C	56 DAP	-7 DA-C	14 DA-C	56 DAP	56 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Yield	GLXMA Injury	GLXMA Injury	SETFA Control	SETFA Control	SETFA Control	AMATA Control	AMATA Control	AMATA Control	XANST Control	XANST Control	XANST Control
11	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	54	12	0	99	98	98	99	98	97	97	99	98
11	V-10148	50	WG	0.066	LB A/A	2.11	OZ/A	PRE	B												
11	V-10149	25	WG	0.019	LB A/A	1.22	OZ/A	PRE	B												
11	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	12-14"W	C												
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	12-14"W	C												
LSD (P=.05)										10.1	3.3	0.0	4.8	0.5	0.6	13.8	0.9	0.8	13.8	0.6	0.8
Replicate F										6.319	0.769	0.000	1.443	5.613	1.805	1.526	2.532	0.789	0.091	3.259	5.270
Replicate Prob(F)										0.0005	0.5516	1.0000	0.2377	0.0011	0.1469	0.2131	0.0552	0.5389	0.9847	0.0210	0.0017
Treatment F										12.703	14.042	0.000	325.660	31224.902	23418.146	57.502	8755.530	11452.220	85.226	21676.178	12371.064
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Weed Code	AMBEL	AMBEL	IPOSS	IPOSS	ABUTH	ABUTH
Crop Code						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-1-04	7-8-04	7-1-04	7-8-04	7-1-04	7-8-04
Trt-Eval Interval	14 DA-C	56 DAP	14 DA-C	56 DAP	14 DA-C	56 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	ROUNDUP W-MAX 1 NO POST HERBICIDES	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	0	0	0	0	0	0
2	ROUNDUP W-MAX 2 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C	99	99	96	94	99	99
3	ROUNDUP W-MAX 3 VALOR	4.5 51	SL WG	0.77 0.048	LB AE/A LB A/A	22 1.5	FL OZ/A OZ/A	PRE PRE	B B	99	99	99	98	99	99
3	ROUNDUP W-MAX 3 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
4	ROUNDUP W-MAX 4 VALOR	4.5 51	SL WG	0.77 0.064	LB AE/A LB A/A	22 2.0	FL OZ/A OZ/A	PRE PRE	B B	99	99	99	98	99	98
4	ROUNDUP W-MAX 4 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
5	ROUNDUP W-MAX 5 VALOR	4.5 51	SL WG	0.77 0.08	LB AE/A LB A/A	22 2.5	FL OZ/A OZ/A	PRE PRE	B B	99	99	99	97	99	97
5	ROUNDUP W-MAX 5 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
6	ROUNDUP W-MAX 6 VALOR	4.5 51	SL WG	0.77 0.048	LB AE/A LB A/A	22 1.5	FL OZ/A OZ/A	PRE PRE	B B	99	99	98	96	99	96
6	FIRSTRATE	84	WG	0.0187	LB A/A	0.356	OZ/A	PRE	B						
6	ROUNDUP W-MAX 6 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
7	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	14EPP	A	99	99	99	97	99	97
7	INTRRO	4	L	1.0	LB A/A	1	QT/A	14EPP	A						
7	ROUNDUP W-MAX 7 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
8	VALOR	51	WG	0.048	LB A/A	1.5	OZ/A	14EPP	A	99	99	97	98	99	99
8	ROUNDUP W-MAX 8 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
9	ROUNDUP W-MAX 9 VALOR	4.5 51	SL WG	0.77 0.048	LB AE/A LB A/A	22 1.5	FL OZ/A OZ/A	PRE PRE	B B	99	99	98	97	98	97
9	INTRRO	4	L	1.0	LB A/A	1	QT/A	PRE	B						
9	ROUNDUP W-MAX 9 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						
10	ROUNDUP W-MAX 10 VALOR	4.5 51	SL WG	0.77 0.048	LB AE/A LB A/A	22 1.5	FL OZ/A OZ/A	PRE PRE	B B	99	99	99	97	99	96
10	CANOPY XL	56.3	WG			1	OZ/A	PRE	B						
10	->CLASSIC	25	WG	0.0058	LB A/A			PRE	B						
10	->AUTHORITY	75	WG	0.0294	LB A/A			PRE	B						
10	ROUNDUP W-MAX 10 AMS	4.5 100	SL DRY	0.77 2.0	LB AE/A % W/W	22 17	FL OZ/A LB/100 GAL	12-14"W 12-14"W	C C						

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Crop Code						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-1-04	7-8-04	7-1-04	7-8-04	7-1-04	7-8-04
Trt-Eval Interval	14 DA-C	56 DAP	14 DA-C	56 DAP	14 DA-C	56 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
11	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	PRE	B	99	99	99	96	99	97
11	V-10148	50	WG	0.066	LB A/A	2.11	OZ/A	PRE	B						
11	V-10149	25	WG	0.019	LB A/A	1.22	OZ/A	PRE	B						
11	ROUNDUP W-MAX	4.5	SL	0.77	LB AE/A	22	FL OZ/A	12-14"W	C						
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	12-14"W	C						
LSD (P=.05)										0.3	0.0	1.1	2.7	0.8	2.9
Replicate F										1.000	0.000	2.150	4.137	2.646	1.938
Replicate Prob(F)										0.4189	1.0000	0.0923	0.0067	0.0474	0.1229
Treatment F										61207.750	0.000	5665.495	959.396	10549.796	856.260
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Valent.
2. Ratings: CI 28 and 56 DAP; WC prior to POST, 14 DA POST and 56 DAP.
3. Tillage prior to 14EPP application, then no additional tillage.
4. POST application timing is 12-14 inch weeds based on treatment #2, apply all POST applications at the same time.
5. DAP = Days after planting. DA-C = Days after 12-14"W application.
6. Ratings on 6-10-04, 7 days before the 12-14"W application, were also 42 days after the 14EPP application, 28 DAP, and 24 days after the PRE application.
7. Harvested 10-7-04, (2) 30 inch rows x 22 ft.