

Valor and Gangster in Roundup Ready Soybean.

Project Code: 05-10C-E120 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: 11-14-05

**Objective:**

To determine the advantages of applying Valor or Gangster preemergence in glyphosate-resistant soybean.

Weed Code	Common Name	Scientific Name
1. XANST	cocklebur, common	Xanthium strumarium L.
2. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
3. SETFA	foxtail, giant	Setaria faberi Herrm.
4. CYPES	nutsedge, yellow	Cyperus esculentus L.
5. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.

Crop 1: GLXMA soybean Variety: Asgrow 4403 RR  
 Planting Method: Seeded Planting Date: 5-12-05  
 Rate: 75 lb/A Depth: 1.0 IN  
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 24 FT Reps: 5  
 Tillage Type: Reduced-Till Study Design: Randomized complete block  
 Previous Crop, Year: ZEAMX, 2004

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

Soil Name: Weir % OM: 2.1 pH: 5.6 CEC: 12  
 Texture: Silt loam Fert. Level: P1: 80 LB/A, K: 435 LB/A

**APPLICATION DESCRIPTION**

	A	B	C
Application Date:	05-12-05	06-13-05	06-30-05
Time of Day:	14:30	11:40	12:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V3	R1-R2
Applic. Placement:	BROSIOI	BROFOL	BROFOL
Air Temp., Unit:	76 F	84 F	80 F
% Relative Humidity:	68	70	34
Wind Velocity, Unit:	5-7 MPH	7 MPH	2 MPH
Soil Moisture:	NORMAL	ABONOR	BELNOR

**CROP STAGE AT EACH APPLICATION**

	A	B	C
Crop 1 Code, Stage:	GLXMA NA	GLXMA V3	GLXMA R1
Height, Unit:	NA NA	6 IN	14 IN

**WEED STAGE AT EACH APPLICATION**

	A	B	C
Weed 1 Code:	XANST	XANST	XANST
Stage (leaves):	5-7	5-8	5-8
Height (inches):	7-10	12-17	12-17
Density:	Medium	Medium	Medium
Weed 2 Code:	AMBEL	AMBEL	AMBEL
Stage (leaves):	6-8	10+	10+
Height (inches):	6-9	10-24	10-24
Density:	Medium	Medium	Medium
Weed 3 Code:	SETFA	SETFA	SETFA
Stage (leaves):	5-8	7-11	7-11
Height (inches):	4-7	12-17	12-17
Density:	High	High	High
Weed 4 Code:	CYPES	CYPES	CYPES
Stage (leaves):	6-8	8-12	8-12
Height (inches):	5-8	6-14	6-14
Density:	Medium	Medium	Medium
Weed 5 Code:	IPOHE	IPOHE	IPOHE
Stage (leaves):	2-5	5-8	5-8
Height (inches):	1-3	8-23	8-23
Density:	Low	Low	Low

**APPLICATION EQUIPMENT**

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40-50 PSI	40-50 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

**NOTES:**

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		GLXMA	GLXMA	GLXMA	XANST	XANST	AMBEL	AMBEL
Trt	Treatment	Form	Form	Rate	Rate	Prod	Prod	Grow	Appl	Yield	Injury	Injury	Control	Control	Control	Control	Control	Control
No.	Name	Conc	Type	Unit	Unit	Rate	Unit	Stg	Code	10-05-05	06-27-05	07-21-05	06-27-05	07-21-05	06-27-05	07-21-05	06-27-05	07-21-05
										bu/A	% w/w	% w/w	Percent	Percent	Percent	Percent	Percent	Percent
											-3 DA-C	21 DA-C	-3 DA-C	21 DA-C	-3 DA-C	21 DA-C	-3 DA-C	21 DA-C
1	NONTREATED									8	0	0	0	0	0	0	0	0
2	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C	53		0		98				98
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	B	64	0	0	99	93	99			99
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V3	B									
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
4	VALOR	51	WG	0.048	lb ai/a	1.5	oz/a	PRE	A	60	0	0	4	99		3		99
4	FIRSTRATE	84	WG	0.0157	lb ai/a	0.30	oz/a	PRE	A									
4	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
5	VALOR	51	WG	0.048	lb ai/a	1.5	oz/a	PRE	A	54	0	0	0	99		3		97
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
6	VALOR	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	58	0	0	1	99		16		98
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
7	VALOR	51	WG	0.048	lb ai/a	1.5	oz/a	PRE	A	65	0	0	29	98		83		99
7	CANOPY EX	29.5	WG			1.1	oz/a	PRE	A									
7	->CLASSIC	25	WG	0.0156	lb ai/a			PRE	A									
7	->EXPRESS	75	WG	0.0047	lb ai/a			PRE	A									
7	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
8	VALOR	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	67	0	0	0	99		11		97
8	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
8	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C									
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
9	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C	58		0		99				97
9	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C									
9	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C									
10	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C	56		0		99				93
10	ARRAY	100	DRY	1.08	% w/w	9	lb/100 gal	R1-R2	C									
11	VALOR	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	51	0	0	22	99		23		97
11	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C									
11	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C									
11	ARRAY	100	DRY	1.08	% w/w	9	lb/100 gal	R1-R2	C									
12	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C	50		0		98				96
12	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C									
12	ARRAY	100	DRY	1.08	% w/w	9	lb/100 gal	R1-R2	C									
LSD (P=.05)										10.5	0.0	0.0	15.8	2.2	21.6		2.6	
Replicate F										0.757	0.000	0.000	1.598	1.770	2.948		0.769	
Replicate Prob(F)										0.5591	1.0000	1.0000	0.2023	0.1521	0.0376		0.5510	
Treatment F										17.406	0.000	0.000	39.287	1400.459	27.077		932.275	
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	0.0001		0.0001	

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Tri-Eval Interval		SETFA	SETFA	CYPES	CYPES	IPOHE
Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Percent	Percent	Percent	Percent	Percent
06-27-05	07-21-05	06-27-05	07-21-05	06-27-05	07-21-05	06-27-05	07-21-05	06-27-05	07-21-05	06-27-05	07-21-05	-3 DA-C	21 DA-C	-3 DA-C	21 DA-C	21 DA-C
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	0
2	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C				99		69	52
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3	B	99	99	46	80	55		
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V3	B							
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
4	VALOR	51	WG	0.048	lb ai/a	1.5	oz/a	PRE	A	0	99	0	52	59		
4	FIRSTRATE	84	WG	0.0157	lb ai/a	0.30	oz/a	PRE	A							
4	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
5	VALOR	51	WG	0.048	lb ai/a	1.5	oz/a	PRE	A	1	99	0	58	57		
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
6	VALOR	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	0	99	0	54	49		
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
7	VALOR	51	WG	0.048	lb ai/a	1.5	oz/a	PRE	A	0	99	93	74	63		
7	CANOPY EX	29.5	WG			1.1	oz/a	PRE	A							
7	->CLASSIC	25	WG	0.0156	lb ai/a			PRE	A							
7	->EXPRESS	75	WG	0.0047	lb ai/a			PRE	A							
7	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
8	VALOR	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	70	99	0	45	52		
8	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
8	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C							
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
9	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C			99		69	54	
9	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C							
9	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	R1-R2	C							
10	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C			99		58	52	
10	ARRAY	100	DRY	1.08	% w/w	9	lb/100 gal	R1-R2	C							
11	VALOR	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	68	99	4	60	48		
11	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C							
11	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C							
11	ARRAY	100	DRY	1.08	% w/w	9	lb/100 gal	R1-R2	C							
12	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R1-R2	C			99		65	51	
12	DOMARK	1.9	ME	0.074	lb ai/a	5	fl oz/a	R1-R2	C							
12	ARRAY	100	DRY	1.08	% w/w	9	lb/100 gal	R1-R2	C							
LSD (P=.05)											18.0	0.0	5.3	11.6	9.2	
Replicate F											2.137	0.000	0.615	3.551	4.285	
Replicate Prob(F)											0.1026	1.0000	0.6557	0.0135	0.0052	
Treatment F											45.407	0.000	352.243	25.559	25.088	
Treatment Prob(F)											0.0001	1.0000	0.0001	0.0001	0.0001	

Trial Comments

1. Protocol: Valent, Rosens.
2. Ratings: CI/WC prior to and 21 DA "C".
3. Yield.
4. Spray POSTs with either XR8002 or XR110015 nozzles at 40-50 PSI.
5. DA-C = Days after R1-R2 application.  
Ratings on 6-27-05 at -3 DA-C are 3 days prior to R1-R2 application.
6. Harvested 10-5-05, (2) 30 inch rows by 21 ft.