

Preemergence Herbicides in Soybean - BASF / Valent.

Trial ID: 08-T3-N40 Location: Belleville Res. Center

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 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-17-08

Objectives: Compare various soil residual herbicides in preemergence applications for weed management and yield in glyphosate-resistant soybean.

Crop 1: GLXMA Soybean Variety: AG 4404 RR/STS
 Planting Method: SEEDED Planting Date: 06-17-08
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: IPOHE Ipomoea hederacea (L.) jacq. morningglory, annual
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 27 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2007

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

% OM: 2.8 Texture: SILT LOAM
 pH: 6.4 Soil Name: BETHALTO
 CEC: 14 Fert. Level: P1: 118 LB/A, K: 466 LB/A

Application Description

	A	B	C	D
Application Date:	06-18-08	07-18-08	07-18-08	07-31-08
Time of Day:	14:00	10:00	10:00	19:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	4"W-1	4"W-2	2-4"RG
Application Placement:	BROSIOI	BROFOL	BROFOL	BROFOL
Applied By:	TGM	TGM	TGM	TGM
Air Temperature, Unit:	81 F	82 F	82 F	88 F
% Relative Humidity:	39	74	74	60
Wind Velocity, Unit:	2 MPH	1 MPH	1 MPH	1 MPH
Dew Presence (Y/N):	N	N	N	N
Soil Temperature, Unit:	81 F	80 F	80 F	85 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	ABONOR
% Cloud Cover:	30	0	0	0
Crop stage at application:	06-18-08	07-18-08	07-18-08	07-31-08
Height Min, Max (inch):	NA	V3-V4	V3-V4	R1
		8 13	8 13	28 34

Pest Stage At Each Application

	06-18-08	07-18-08	07-18-08	07-31-08
Application Date:	06-18-08	07-18-08	07-18-08	07-31-08
Weed Code:	IPOHE	IPOHE	IPOHE	IPOHE
Stage Majority (leaves):	NA	6	6	4
Stage Min, Max:		2 20	2 20	COTY 8
Height Majority:		6 IN	6 IN	4 IN
Height Min, Max:		3 12	3 12	2 7
Density, Unit:		1 FT2	1 FT2	0.5 FT2
Weed Code:	AMATA	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	5	5	NA
Stage Min, Max:		3 10	3 10	
Height Majority:		3 IN	3 IN	
Height Min, Max:		1 5	1 5	
Density, Unit:		1 FT2	1 FT2	

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

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Pest Code								GLXMA	GLXMA	GLXMA	GLXMA	IPOHE	IPOHE	AMATA	AMATA	
Crop Code								10-27-08	10-27-08	07-15-08	08-12-08	07-15-08	08-12-08	07-15-08	08-12-08	
Rating Date								Moisture	Yield	Injury	Injury	Control	Control	Control	Control	
Rating Data Type								Percent	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	
Rating Unit										28 DAP	56 DAP	28 DAP	56 DAP	28 DAP	56 DAP	
Rating Timing										-3 DA-C	25 DA-C	-3 DA-C	25 DA-C	-3 DA-C	25 DA-C	
Trt-Eval Interval																
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
1	NONTREATED								13.2 a	52 a	0 a	0 a	0 d	0 b	0 b	
2	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"W-1 B		12.7 b	60 a		0 a		95 a	99 a	
2	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-1 B									
3	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"W-1 B		12.8 b	56 a		0 a		95 a	99 a	
3	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-1 B									
3	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		2-4"RG D									
3	N-PAK AMS	100 SL		5 % v/v	5 % v/v		2-4"RG D									
4	PROWL H2O	3.8 CS		1.19 lb ai/a	2.5 pt/a		PRE A		12.8 b	57 a	0 a	0 a	37 c	97 a	66 a	99 a
4	EXTREME	2.17 SL		0.81 lb ai/a	3 pt/a		4-6"W-2 C									
4	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		4-6"W-2 C									
4	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-2 C									
5	PROWL H2O	3.8 CS		1.19 lb ai/a	2.5 pt/a		PRE A		12.8 b	56 a	0 a	0 a	77 a	98 a	99 a	99 a
5	SCEPTER	70 WG		0.092 lb ai/a	2.1 oz/a		PRE A									
5	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"W-2 C									
5	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-2 C									
6	PROWL H2O	3.8 CS		1.19 lb ai/a	2.5 pt/a		PRE A		12.7 b	58 a	0 a	0 a	33 c	96 a	99 a	99 a
6	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"W-2 C									
6	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-2 C									
7	VALOR XLT	40.3 WG			3 oz/a		PRE A		12.6 b	58 a	0 a	0 a	53 bc	98 a	99 a	99 a
7	VALOR SX	51 WG		0.056 lb ai/a			PRE A									
7	CLASSIC	25 WG		0.0194 lb ai/a			PRE A									
7	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"W-2 C									
7	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-2 C									
8	VALOR XLT	40.3 WG			3.5 oz/a		PRE A		12.7 b	56 a	1 a	0 a	60 ab	97 a	99 a	99 a
8	VALOR SX	51 WG		0.0653 lb ai/a			PRE A									
8	CLASSIC	25 WG		0.0227 lb ai/a			PRE A									
8	ROUNDUP P-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		4-6"W-2 C									
8	N-PAK AMS	100 SL		5 % v/v	5 % v/v		4-6"W-2 C									
LSD (P=.05)									0.32	9.3	1.3	0.0	20.2	5.2	42.4	0.0
Replicate F									0.848	0.353	1.000	0.000	2.568	1.402	1.000	0.000
Replicate Prob(F)									0.4492	0.7088	0.4019	1.0000	0.1259	0.2786	0.4019	1.0000
Treatment F									3.255	0.553	1.000	0.000	17.081	406.138	8.800	0.000
Treatment Prob(F)									0.0286	0.7808	0.4651	1.0000	0.0001	0.0001	0.0020	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: BASF; Valent (MD 64.04 partial).
2. Ratings: CI/WC at 28 DAP or prior to POST (whichever comes first); CI/WC at 56 DAP and 28 DA"C".
3. Yield.
4. DAP = Days after planting. DA-C = Days after 4"W-1 and 4"W-2 applications (applied the same day).
Ratings at 25 DA-C were also 12 DA-D (12 days after the 2-4"RG application).
5. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
Following the PRE application on June 18, rainfall was 0.29 inch 2 days later and 0.35 inch 9 days later.
6. Harvested 10-27-08, (2) 30 inch rows by 24 ft.