

Evaluation of Roundup Ready Soybean Tolerance to Formulations of Glyphosate.

Project Code: 03-20A-W110 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 11-19-03

Objective:

Determine crop safety of various glyphosate formulations on Roundup Ready soybeans.

Weed Code	Common Name	Scientific Name
1. NA	crop tolerance only	

Crop 1:	GLXMA soybean	Variety:	Asgrow 4603 RR
Planting Method:	Seeded	Planting Date:	5-24-03
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	37 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2002				

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K2O 200 LB/A

Soil Name:	Ebbert	% OM:	1.5	pH:	6.4	CEC:	12
Texture:	Silt loam	Fert. Level:	P1: 79 LB/A, K: 182 LB/A				

APPLICATION DESCRIPTION

A	
Application Date:	7-22-03
Time of Day:	7:00
Application Method:	Spray
Application Timing:	R1
Applic. Placement:	BROFOL
Air Temp., Unit:	72 F
% Relative Humidity:	60
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	Y
Soil Moisture:	ABONOR
% Cloud Cover:	10

CROP STAGE AT EACH APPLICATION

A	
Crop 1 Code, Stage:	GLXMA R1
Height, Unit:	16 IN

APPLICATION EQUIPMENT

A	
Appl. Equipment:	CO2 sprayer
Operating Pressure:	40 PSI
Nozzle Type:	Flat fan
Nozzle Size:	DG 110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

NOTES:

Harvested Oct-15-03, (2) 30 inch rows by 35 ft.

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Weed Code			
Crop Code		GLXMA	GLXMA
Rating Data Type		Yield	Injury
Rating Unit		bu/A	Percent
Rating Date		10-15-03	8-5-03
Trt-Eval Interval			8-19-03
			14 DA-A
			28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
1	NONTREATED									53	0	0
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	FL OZ/A	R1	A	51	0	0
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	R1	A	54	0	0
4	CLEAROUT 41 PLUS	3	L	0.75	LB AE/A	32	FL OZ/A	R1	A	54	0	0
5	ROUNDUP ORIGINAL	3	SL	0.75	LB AE/A	32	FL OZ/A	R1	A	53	0	0
5	ACTIVATOR 90	100	LIQ	0.5	% V/V	0.5	% V/V	R1	A			
6	ROUNDUP ULTRA MAX	3.7	SL	1.13	LB AE/A	39	FL OZ/A	R1	A	54	0	0
7	ROUNDUP W-MAX	4.5	SL	1.13	LB AE/A	32	FL OZ/A	R1	A	50	0	0
8	CLEAROUT 41 PLUS	3	L	1.13	LB AE/A	48	FL OZ/A	R1	A	54	0	0
9	ROUNDUP ORIGINAL	3	SL	1.13	LB AE/A	48	FL OZ/A	R1	A	51	0	0
9	ACTIVATOR 90	100	LIQ	0.5	% V/V	0.5	% V/V	R1	A			
10	ROUNDUP ULTRA MAX	3.7	SL	1.5	LB AE/A	52	FL OZ/A	R1	A	53	0	0
11	ROUNDUP W-MAX	4.5	SL	1.5	LB AE/A	42.7	FL OZ/A	R1	A	51	1	0
12	CLEAROUT 41 PLUS	3	L	1.5	LB AE/A	64	FL OZ/A	R1	A	50	1	0
13	ROUNDUP ORIGINAL	3	SL	1.5	LB AE/A	64	FL OZ/A	R1	A	53	1	0
13	ACTIVATOR 90	100	LIQ	0.5	% V/V	0.5	% V/V	R1	A			
14	ROUNDUP ULTRA MAX	3.7	SL	2.25	LB AE/A	78	FL OZ/A	R1	A	51	5	1
15	ROUNDUP W-MAX	4.5	SL	2.25	LB AE/A	64	FL OZ/A	R1	A	51	6	1
16	CLEAROUT 41 PLUS	3	L	2.25	LB AE/A	96	FL OZ/A	R1	A	52	4	0
17	ROUNDUP ORIGINAL	3	SL	2.25	LB AE/A	96	FL OZ/A	R1	A	52	4	0
17	ACTIVATOR 90	100	LIQ	0.5	% V/V	0.5	% V/V	R1	A			
18	ROUNDUP ULTRA MAX	3.7	SL	3.0	LB AE/A	104	FL OZ/A	R1	A	49	6	1
19	ROUNDUP W-MAX	4.5	SL	3.0	LB AE/A	85	FL OZ/A	R1	A	51	11	2
20	CLEAROUT 41 PLUS	3	L	3.0	LB AE/A	128	FL OZ/A	R1	A	51	7	2

Weed Code											
Crop Code								GLXMA	GLXMA	GLXMA	
Rating Data Type								Yield	Injury	Injury	
Rating Unit								bu/A	Percent	Percent	
Rating Date								10-15-03	8-5-03	8-19-03	
Trt-Eval Interval								14 DA-A	28 DA-A		

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
21	ROUNDUP ORIGINAL	3	SL	3.0	LB AE/A	128	FL OZ/A	R1	A	52	11	2
21	ACTIVATOR 90	100	LIQ	0.5	% V/V	0.5	% V/V	R1	A			
22	NONTREATED									51	0	0
	LSD (P=.05)									3.5	1.5	0.3
	Replicate F									4.481	3.798	1.537
	Replicate Prob(F)									0.0172	0.0305	0.2270
	Treatment F									1.530	42.901	49.293
	Treatment Prob(F)									0.1190	0.0001	0.0001

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Trial Comments

1. Protocol: SIU (BGY).
2. Ratings: CI 14 and 28 DAT.
3. Blanket PRE application of Dual II Magnum at 1.27 lbai/A applied 10 ft wide to all plots including the nontreated on 5-24-03.
4. DA-A = days after R1 application.