

Evaluation of 2,4-D use in Soybean.

Project Code: 06-50E-MS40 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:** 11-22-06

Objective:

Evaluate crop response and weed control achieved by tank-mixing 2,4-D with glyphosate in glyphosate-resistant soybean.

Weed Code	Common Name	Scientific Name
1. AMBTR	ragweed, giant	Ambrosia trifida L.
2. AMATA	waterhemp, common	Amaranthus rudis Sauer
3. IPOHE	morningglory, annual	Ipomoea hederacea (L.) jacq.

Crop 1:	GLXMA soybean	Variety:	Asgrow 4403 RR
Planting Method:	Seeded	Planting Date:	5-22-06
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	27 FT	Reps:	3
Tillage Type:	No-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2005				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 100 LB/A				

Soil Name:	Weir	% OM:	2.2	pH:	6.7	CEC:	12
Texture:	Silt loam	Fert. Level:	P1: 101 LB/A, K: 388 LB/A				

APPLICATION DESCRIPTION

A

Application Date:	6-21-06
Time of Day:	8:30
Application Method:	Spray
Application Timing:	6-10"W
Applic. Placement:	BROFOL
Air Temp., Unit:	82 F
% Relative Humidity:	92
Wind Velocity, Unit:	4-5 MPH
Soil Moisture:	NORMAL

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:	GLXMA V3
Height, Unit:	6-7 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	AMBTR
Stage (leaves):	4-6
Height (inches):	6-10
Density:	High
Weed 2 Code:	AMATA
Stage (leaves):	6-8
Height (inches):	6-10
Density:	Low
Weed 3 Code:	IPOHE
Stage (leaves):	10+
Height (inches):	6-8
Density:	Low

APPLICATION EQUIPMENT

A

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

NOTES:

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Weed Code		Crop Code		GLXMA Moisture Percent		GLXMA Yield bu/A		GLXMA Injury Percent		GLXMA Injury Percent		AMBTR Control Percent	AMBTR Control Percent	AMATA Control Percent	AMATA Control Percent		
Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	10-21-06	10-21-06	7-12-06	8-16-06	7-12-06	8-16-06	7-12-06	8-16-06	21 DA-A	56 DA-A	21 DA-A	56 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code								
1	NONTREATED									12.7	19	0	0	0	0		
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"	W A	12.9	49	0	0	97	92		
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A					99	99		
3	T101	75	WP	0.0225	lb ae/a	0.48	oz/a	6-10"	W A	13.2	20	0	0	42	18		
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A					23	13		
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"	W A	13.1	52	2	0	98	97		
4	T101	75	WP	0.0225	lb ae/a	0.48	oz/a	6-10"	W A					99	99		
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A								
5	T101	75	WP	0.0337	lb ae/a	0.72	oz/a	6-10"	W A	12.8	20	3	0	60	27		
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A					30	18		
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"	W A	13.2	48	7	0	98	92		
6	T101	75	WP	0.0337	lb ae/a	0.72	oz/a	6-10"	W A					99	99		
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A								
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"	W A	13.2	47	10	0	97	90		
7	BUTYRAC 200	2	EC	0.0225	lb ae/a	1.44	fl oz/a	6-10"	W A					99	99		
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A								
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"	W A	13.0	47	12	0	97	92		
8	BUTYRAC 200	2	EC	0.0337	lb ae/a	2.16	fl oz/a	6-10"	W A					99	99		
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"	W A								
LSD (P=.05)										0.38	9.7	5.0	0.0	10.7	8.9	15.3	6.0
Replicate F										0.382	0.127	1.006	0.000	0.035	1.244	1.930	1.356
Replicate Prob(F)										0.6893	0.8820	0.3907	1.0000	0.9660	0.3182	0.1845	0.2918
Treatment F										2.140	21.660	8.542	0.000	108.929	194.769	73.088	552.330
Treatment Prob(F)										0.1069	0.0001	0.0004	1.0000	0.0001	0.0001	0.0001	0.0001

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Weed Code		IPOHE	IPOHE
Crop Code			
Rating Data Type		Control	Control
Rating Unit		Percent	Percent
Rating Date		7-12-06	8-16-06
Trt-Eval Interval		21 DA-A	56 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
1	NONTREATED									0	0
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"W	A	93	93
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
3	T101	75	WP	0.0225	lb ae/a	0.48	oz/a	6-10"W	A	96	85
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"W	A	93	90
4	T101	75	WP	0.0225	lb ae/a	0.48	oz/a	6-10"W	A		
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
5	T101	75	WP	0.0337	lb ae/a	0.72	oz/a	6-10"W	A	90	84
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"W	A	96	92
6	T101	75	WP	0.0337	lb ae/a	0.72	oz/a	6-10"W	A		
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
7	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"W	A	97	90
7	BUTYRAC 200	2	EC	0.0225	lb ae/a	1.44	fl oz/a	6-10"W	A		
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"W	A	93	88
8	BUTYRAC 200	2	EC	0.0337	lb ae/a	2.16	fl oz/a	6-10"W	A		
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-10"W	A		
LSD (P=.05)										7.6	8.4
Replicate F										2.217	3.213
Replicate Prob(F)										0.1457	0.0710
Treatment F										179.004	129.955
Treatment Prob(F)										0.0001	0.0001

Trial Comments

1. Protocol: SIU.
2. Ratings: CI/WC 21 + 56 DAT.
3. Yield if justified.
4. Blanket application of a POST grass herbicide may be used if necessary.
5. DA-A = Days after 6-10"W application.
6. Harvested 10-21-06, (2) 30 inch rows by 24 ft.