Effect of Soil Residual on Weed Spectrum at Postemergence Timing - Study 2.

02-50E-S80

OBJECTIVE: Determine any difference in weed spectrum from several soil residual herbicides at a postemergence application of glyphosate. Furthermore, determine if the performance of glyphosate is different as a response to the soil applied herbicides.

SUMMARY: This research was initiated in response to the increasing popularity of using a soil residual herbicide followed by glyphosate. Various soil residual herbicides were applied preemergence (PRE) and followed with a postemergence application of glyphosate when weeds were 10 to 12 inches in height. No significant rainfall was received for 7 days following the PRE herbicide applications. Giant ragweed was the most prevalent weed species in this study. Prowl, Sencor, Canopy XL, Valor, and FirstRate significantly reduced giant ragweed densities with the greatest reduction observed from FirstRate. However, FirstRate plots had the highest densities of giant foxtail and common waterhemp. Giant foxtail and common cocklebur control was 99% following the postemergence (10 to 12" weeds) application of glyphosate (DAPO). Common waterhemp control was also 99% for all treatments at 14 days after the postemergence applications. Only FirstRate or Canopy XL followed by glyphosate provided giant ragweed control similar to the sequential application of glyphosate at 30 DAPO. Giant ragweed control was 82 to 90% in all other herbicide treated plots. Soybean yield was 52 bu/A in plots treated with the sequential application of glyphosate. Plots treated with Prowl, Sencor, Python, Canopy XL, Valor, and FirstRate yielded similar to the sequential glyphosate treatment. Plots treated with Dual II Magnum, Axiom, Boundary, Domain, or Authority followed by glyphosate yielded significantly less than plots treated with the sequential application of glyphosate. These reductions in soybean yield were likely due to less control of giant ragweed and subsequent competition with the crop.

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HERBICIDES	WEEDS	CROP
AUTHORITY 75 WG	cocklebur, common	soybean
AXIOM 68 WG	foxtail, giant	
BOUNDARY 7.8 EC	lambsquarters, common	
CANOPY XL 56.3 WG	morningglory, ivyleaf	
CLASSIC 25 WG	nutsedge, yellow	
DOMAIN 60 WG	ragweed, common	
DUAL II MAGNUM 7.64 EC	ragweed, giant	
FIRSTRATE 84 WG	sida, prickly	
PROWL 3.3 EC	velvetleaf	
PYTHON 80 WG	waterhemp, common	
ROUNDUP ULTRA MAX 3.7 SL		
SENCOR 75 WG		
VALOR 51 WG		

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Effect of Soil Residual on Weed Spectrum at Postemergence Timing - Study 2.

Project Code: 02-50E-S80 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 10-29-02

Objective:
Determine any difference in weed spectrum from several soil residual herbicides at a postemergence application of glyphosate. Furthermore, determine if the performance of glyphosate is different as a response to the soil applied herbicides.

	Weed Code	Common Name	Scientific Name
1.	SETFA	foxtail, giant	Setaria faberi Herrm.
2.	AMBTR	ragweed, giant	Ambrosia trifida L.
3.	XANST	cocklebur, common	Xanthium strumarium L.
4.	AMATA	waterhemp, common	Amaranthus rudis Sauer
5.	IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.
6.	AMBEL	ragweed, common	Ambrosia artemisiifolia L.
7.	CYPES	nutsedge, yellow	Cyperus esculentus L.
8.	ABUTH	velvetleaf	Abutilon theophrasti Medicus
9.	SIDSP	sida, prickly	Sida spinosa L.
10.	CHEAL	lambsquarters, common	Chenopodium album L.
11.	TTTTT	weeds, generally	

Crop 1: GLXMA soybean **Variety:** Asgrow 4602 RR
Planting Method: Seeded **Planting Date:** 6-3-02
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: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: ZEAMX, 2001

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 200 LB/A

Soil Name: Weir **% OM:** 1.4 **pH:** 6.9 **CEC:** 12
Texture: Silt loam **Fert. Level:** P1: 83 LB/A, K: 181 LB/A

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	6-4-02	6-27-02	7-2-02	7-2-02	7-12-02	7-3-02
Time of Day:	10:30	11:00	10:00	10:00	8:00	
Application Method:	Spray	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	4-8"W	10-12"W1	10-12"W2	2-4"REGR	10-12"W3
Applic. Placement:	BROSOI	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	90 F	88 F	94 F	94 F	72 F	94 F
% Relative Humidity:	48	50	40	40	40	42
Wind Velocity, Unit:	5-10 MPH	3-5 MPH	3-5 MPH	3-5 MPH	3-5 MPH	0-3 MPH
Soil Moisture:	NORMAL	BELNOR	BELNOR	BELNOR	BELNOR	BELNOR
% Cloud Cover:	15	20	15	15	100	

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Crop 1 Code, Stage:	GLXMA NA	GLXMA V1-V2	GLXMA V3	GLXMA V3	GLXMA V5	GLXMA V3
Height, Unit:	NA IN	4-6 IN	6-8 IN	6-8 IN	12 IN	6-8 IN

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Weed 1 Code:		SETFA	SETFA	SETFA		SETFA
Stage(leaves):		3-7	5-7	5-7		5-7
Height(inches):		1-7	3-10	3-10		3-10
Density:		Medium	Low	Medium		Medium
Weed 2 Code:		AMBTR	AMBTR	AMBTR	AMBTR	AMBTR
Stage(leaves):		2-8	2-10	0-10	6-10	4-10
Height(inches):		3-8	2-20	1-20	2-10	4-12
Density:		High	High	High	Low	Medium

Weed 3 Code:	XANST	XANST	XANST		XANST
Stage(leaves):	3-5	3-5	2-5		2-4
Height(inches):	2-4	4-9	4-10		3-6
Density:	Low	Low	Low		Low
Weed 4 Code:	AMATA	AMATA	AMATA	AMATA	AMATA
Stage(leaves):	0-8	3-10	3-9	2-6	4-20
Height(inches):	0-4	1-10	0-7	2-4	2-12
Density:	Low	Low	Low	Low	Medium
Weed 5 Code:	IPOHE	IPOHE	IPOHE	IPOHE	
Stage(leaves):	0-3	1-4	4-5	4-6	
Height(inches):	1-2	2-4	3-5	4-6	
Density:	Low	Low	Low	Low	
Weed 6 Code:	AMBEL	AMBEL	AMBEL		
Stage(leaves):	2	4-6	4-8		
Height(inches):	0.5	3-6	2-9		
Density:	Low	Low	Low		
Weed 7 Code:	CYPES	CYPES	CYPES	CYPES	CYPES
Stage(leaves):	4-10	7-10	4-11	3-6	5-10
Height(inches):	3-7	4-7	3-11	3-6	4-6
Density:	Low	Low	Low	Low	Low
Weed 8 Code:	ABUTH	ABUTH	ABUTH		
Stage(leaves):	2-4	2-4	3-5		
Height(inches):	1-3	2-5	2-7		
Density:	Low	Low	Low		
Weed 9 Code:	SIDSP	SIDSP	SIDSP		
Stage(leaves):	2	2	2		
Height(inches):	1	1-2	1-2		
Density:	Low	Low	Low		

APPLICATION EQUIPMENT

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

NOTES:

Application "F" (originally a "D") was delayed to allow for weeds to reach correct height for biomass.

Harvested Oct-22-02, (2) 30 inch rows by 24 ft.

Effect of Soil Residual on Weed Spectrum at Postemergence Timing - Study 2.

Project Code: 02-50E-S80 Location: Belleville Research Center

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Yield bu/A 10-22-02	GLXMA Injury Percent 6-24-02 21 DAP	GLXMA Height cm 8-6-02 64 DAP	SETFA Control Percent 6-27-02 At Post	SETFA Control Percent 7-16-02 14 DA-C	SETFA Control Percent 8-1-02 30 DA-C	AMBTR Control Percent 6-27-02 At Post	AMBTR Control Percent 7-16-02 14 DA-C	AMBTR Control Percent 8-1-02 30 DA-C	XANST Control Percent 6-27-02 At Post	XANST Control Percent 7-16-02 14 DA-C	XANST Control Percent 8-1-02 30 DA-C
1	NONTREATED									1	0	71	0	0	0	0	0	0	0	0	0
2	PROWL	3.3	EC	0.743	LB A/A	1.8	PT/A	PRE	A	49	0	85	95	99	99	0	83	88	0	99	97
2	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
3	DUAL II MAGNUM	7.64	EC	1.27	LB A/A	1.33	PT/A	PRE	A	42	0	73	99	99	99	0	84	88	0	99	99
3	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
4	AXIOM	68	WG	0.2975	LB A/A	7	OZ/A	PRE	A	43	0	68	99	99	99	0	83	87	0	99	99
4	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
5	BOUNDARY	7.8	EC	1.22	LB A/A	1.25	PT/A	PRE	A	44	0	79	99	99	99	0	86	86	0	99	98
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
6	DOMAIN	60	WG	0.3375	LB A/A	9	OZ/A	PRE	A	39	0	82	99	99	99	17	80	83	0	99	98
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
7	SENCOR	75	WG	0.5	LB A/A	0.67	LB/A	PRE	A	49	3	84	70	99	99	63	86	90	35	99	97
7	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
7	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
8	PYTHON	80	WG	0.057	LB A/A	1.14	OZ/A	PRE	A	50	0	84	7	99	99	40	85	89	80	99	96
8	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
9	AUTHORITY	75	WG	0.1406	LB A/A	3	OZ/A	PRE	A	36	2	72	80	99	99	13	86	83	0	99	98
9	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
9	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
10	CANOPY XL	56.3	WG			4.5	OZ/A	PRE	A	52	0	88	57	99	99	62	87	93	90	99	99
10	->CLASSIC	25	WG	0.0264	LB A/A			PRE	A												
10	->AUTHORITY	75	WG	0.132	LB A/A			PRE	A												
10	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
11	VALOR	51	WG	0.0781	LB A/A	2.45	OZ/A	PRE	A	53	7	90	83	99	99	68	85	88	0	99	99
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
11	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Yield bu/A 10-22-02	GLXMA Injury Percent 6-24-02 21 DAP	GLXMA Height cm 8-6-02 64 DAP	SETFA Control Percent 6-27-02 At Post	SETFA Control Percent 7-16-02 14 DA-C	SETFA Control Percent 8-1-02 30 DA-C	AMBTR Control Percent 6-27-02 At Post	AMBTR Control Percent 7-16-02 14 DA-C	AMBTR Control Percent 8-1-02 30 DA-C	XANST Control Percent 6-27-02 At Post	XANST Control Percent 7-16-02 14 DA-C	XANST Control Percent 8-1-02 30 DA-C
12	FIRSTRATE	84	WG	0.0315	LB A/A	0.6	OZ/A	PRE	A	57	0	93	10	99	99	88	93	95	92	99	99
12	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W3	F												
12	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W3	F												
13	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W1	C	44		77		99	99		83	82		99	99
13	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W1	C												
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	B	52		83		99	99		92	98		99	99
14	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-8"W	B												
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	2-4"REGR	E												
14	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	2-4"REGR	E												
15	HANDWEED									45	0	96	99	99	99	99	99	99	99	99	99
LSD (P=.05)										7.6	2.3	13.8	16.5	0.0	0.0	12.2	5.8	6.3	14.1	0.0	2.3
Replicate F										0.618	0.545	0.160	0.608	0.000	0.000	1.002	4.825	0.484	1.107	0.000	1.383
Replicate Prob(F)										0.5472	0.5866	0.8529	0.5544	1.0000	1.0000	0.3841	0.0169	0.6219	0.3490	1.0000	0.2695
Treatment F										25.164	6.140	3.016	47.044	0.000	0.000	79.219	132.215	120.818	78.730	0.000	994.227
Treatment Prob(F)										0.0001	0.0001	0.0072	0.0001	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001

Weed Code										AMATA	AMATA	AMATA
Crop Code												
Rating Data Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Date										6-27-02	7-16-02	8-1-02
Trt-Eval Interval										At Post	14 DA-C	30 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
2	PROWL	3.3	EC	0.743	LB A/A	1.8	PT/A	PRE	A	88	99	95
2	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
3	DUAL II MAGNUM	7.64	EC	1.27	LB A/A	1.33	PT/A	PRE	A	98	99	99
3	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
4	AXIOM	68	WG	0.2975	LB A/A	7	OZ/A	PRE	A	95	99	97
4	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
5	BOUNDARY	7.8	EC	1.22	LB A/A	1.25	PT/A	PRE	A	99	99	99
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
6	DOMAIN	60	WG	0.3375	LB A/A	9	OZ/A	PRE	A	99	99	99
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
7	SENCOR	75	WG	0.5	LB A/A	0.67	LB/A	PRE	A	99	99	99
7	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
7	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
8	PYTHON	80	WG	0.057	LB A/A	1.14	OZ/A	PRE	A	0	99	99
8	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
9	AUTHORITY	75	WG	0.1406	LB A/A	3	OZ/A	PRE	A	99	99	98
9	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
9	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
10	CANOPY XL	56.3	WG			4.5	OZ/A	PRE	A	99	99	99
10	->CLASSIC	25	WG	0.0264	LB A/A			PRE	A			
10	->AUTHORITY	75	WG	0.132	LB A/A			PRE	A			
10	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
11	VALOR	51	WG	0.0781	LB A/A	2.45	OZ/A	PRE	A	94	99	99
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D			
11	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D			
12	FIRSTRATE	84	WG	0.0315	LB A/A	0.6	OZ/A	PRE	A	0	99	88
12	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W3	F			
12	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W3	F			

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
Weed Code										AMATA	AMATA	AMATA
Crop Code												
Rating Data Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Date										6-27-02	7-16-02	8-1-02
Trt-Eval Interval										At Post	14 DA-C	30 DA-C
13	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W1	C		99	85
13	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W1	C			
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	B		99	99
14	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-8"W	B			
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	2-4"REGR	E			
14	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	2-4"REGR	E			
15	HANDWEED									99	99	99
LSD (P=.05)										5.1	0.0	3.6
Replicate F										0.249	0.000	1.225
Replicate Prob(F)										0.7819	1.0000	0.3107
Treatment F										601.550	0.000	419.970
Treatment Prob(F)										0.0001	1.0000	0.0001

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMBTR	XANST	SETFA	AMATA	IPOHE	AMBEL	CYPES	ABUTH	SIDSP	CHEAL	TTTTT	TTTTT
	Weed Code																				
	Crop Code																				
	Rating Data Type									Plants	Plants	Plants	Plants	Plants	Plants	Plants	Plants	Plants	Plants	Fresh Wt	Dry Wt.
	Rating Unit									1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	g/1.0 m2	g/1.0 m2
	Rating Date																				
	Trt-Eval Interval									At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post
1	NONTREATED																				
2	PROWL	3.3	EC	0.743	LB A/A	1.8	PT/A	PRE	A	68.0	6.0	5.0	0.0	3.0	0.0	21.0	0.0	0.0	0.0	370.0	76.0
2	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
2	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
3	DUAL II MAGNUM	7.64	EC	1.27	LB A/A	1.33	PT/A	PRE	A	104.0	0.0	2.7	1.3	2.0	0.0	0.0	0.0	0.0	0.7	702.7	113.3
3	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
3	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
4	AXIOM	68	WG	0.2975	LB A/A	7	OZ/A	PRE	A	149.0	2.0	0.0	0.0	5.0	1.0	4.0	1.0	0.0	0.0	410.0	74.0
4	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
4	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
5	BOUNDARY	7.8	EC	1.22	LB A/A	1.25	PT/A	PRE	A	106.0	5.3	1.3	0.0	4.0	0.0	1.3	0.0	0.0	0.0	624.0	98.7
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
5	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
6	DOMAIN	60	WG	0.3375	LB A/A	9	OZ/A	PRE	A	94.0	4.7	3.3	0.0	5.3	1.3	6.7	0.0	0.0	0.0	346.7	66.7
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
6	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
7	SENCOR	75	WG	0.5	LB A/A	0.67	LB/A	PRE	A	57.0	13.0	5.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	342.0	62.0
7	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
7	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
8	PYTHON	80	WG	0.057	LB A/A	1.14	OZ/A	PRE	A	89.3	12.0	16.7	27.3	6.0	7.3	4.0	0.0	0.0	0.0	374.7	69.3
8	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
9	AUTHORITY	75	WG	0.1406	LB A/A	3	OZ/A	PRE	A	104.0	8.0	30.7	5.3	0.7	0.0	34.0	0.0	0.0	0.0	578.7	97.3
9	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
9	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
10	CANOPY XL	56.3	WG			4.5	OZ/A	PRE	A	54.0	4.0	41.3	2.0	0.7	0.0	1.3	0.0	0.0	0.0	245.3	45.3
10	->CLASSIC	25	WG	0.0264	LB A/A			PRE	A												
10	->AUTHORITY	75	WG	0.132	LB A/A			PRE	A												
10	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
10	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
11	VALOR	51	WG	0.0781	LB A/A	2.45	OZ/A	PRE	A	48.0	1.3	22.0	2.7	0.7	0.0	3.3	0.0	0.0	0.0	290.7	52.0
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W2	D												
11	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W2	D												
12	FIRSTRATE	84	WG	0.0315	LB A/A	0.6	OZ/A	PRE	A	19.3	0.0	78.0	141.3	4.7	0.0	0.0	0.0	0.0	0.0	334.7	57.3
12	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W3	F												
12	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W3	F												

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMBTR	XANST	SETFA	AMATA	IPOHE	AMBEL	CYPES	ABUTH	SIDSP	CHEAL	TTTTT	TTTTT
Weed Code																					
Crop Code																					
Rating Data Type										Plants	Plants	Plants	Plants	Plants	Plants	Plants	Plants	Plants	Plants	Fresh Wt	Dry Wt.
Rating Unit										1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	1.0 m2	g/1.0 m2	g/1.0 m2
Rating Date																					
Trt-Eval Interval										At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post	At Post
13	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W1	C	122.0	6.0	43.3	64.7	12.7	0.7	4.0	2.0	0.7	0.0	656.0	102.7
13	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W1	C												
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-8"W	B	115.3	4.0	181.3	57.3	10.0	2.0	10.0	2.7	1.3	0.0	288.7	43.3
14	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	4-8"W	B												
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	2-4"REGR	E												
14	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	2-4"REGR	E												
15	HANDWEED																				
LSD (P=.05)										54.28	11.58	92.75	42.71	7.02	6.57	31.80	2.34	1.32	0.58	276.13	33.75
Replicate F										0.753	2.516	2.067	3.898	11.941	1.049	0.479	1.225	0.508	0.875	2.292	2.877
Replicate Prob(F)										0.4833	0.1048	0.1516	0.0363	0.0003	0.3678	0.6259	0.3139	0.6089	0.4315	0.1258	0.0787
Treatment F										3.748	1.068	2.519	8.387	2.412	0.823	0.845	1.265	0.790	0.875	2.737	3.967
Treatment Prob(F)										0.0040	0.4311	0.0308	0.0001	0.0373	0.6273	0.6079	0.3071	0.6556	0.5825	0.0210	0.0029

Effect of Soil Residual on Weed Spectrum at Postemergence Timing - Study 2.

Project Code: 02-50E-S80 Location: Belleville Research Center

Trial Comments

1. Protocol: SIU (BGY).
2. DAP = days after planting. At Post = at various postemergence application timings. DA-C = days after 10-12"W1, 10-12"W2, or 10-12"W3 applications.
3. 1.0 m2 = 1.0 square meter. Fresh Wt = fresh wieght of weeds. Dry Wt. = oven dry weight of weeds. TTTTT = weeds generally.