

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 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: 1-23-08

Objective:

Evaluate different grass and broadleaf herbicides ahead of glyphosate-resistant corn.
 Evaluate the rate structure necessary for two different application timings of residual herbicides.
 Determine the competitive load imposed on corn as a result of the residual herbicide efficacy.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. PANDI	panicum, fall	Panicum dichotomiflorum Michx.
3. CYPES	nutsedge, yellow	Cyperus esculentus L.
4. AMBTR	ragweed, giant	Ambrosia trifida L.
5. ABUTH	velvetleaf	Abutilon theophrasti Medicus
6. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1: ZEAMX corn, field Variety: 33K44
 Planting Method: Seeded Planting Date: 5-21-07
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 25 FT Reps: 4
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: GLXMA, 2006
 Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Name: Weir % OM: 2 pH: 6.9 CEC: 9
 Texture: Silt loam Fert. Level: P1: 131 LB/A, K: 401 LB/A

APPLICATION DESCRIPTION

	A	B	C
Application Date:	4-24-07	5-21-07	6-18-07
Time of Day:	9:00	19:15	10:30
Application Method:	Spray	Spray	Spray
Application Timing:	EPP14	PRE	V6
Applic. Placement:	BROSOI	BROFOL	BROFOL
Air Temp., Unit:	60 F	64 F	84 F
% Relative Humidity:	92	90	78
Wind Velocity, Unit:	3 MPH	0-1 MPH	5-7 MPH
Dew Presence (Y/N):		N	N
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:		20	50

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX NA	ZEAMX V6
Height, Unit:	NA NA	NA NA	20-22 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:		SETFA	SETFA
Stage (leaves):		2-4	5-12
Height (inches):		1-3	4-24
Density:		High	High
Weed 2 Code:		PANDI	PANDI
Stage (leaves):		2-4	4-8
Height (inches):		1-3	3-8
Density:		Low	Medium
Weed 3 Code:		CYPES	CYPES
Stage (leaves):		3-6	6-10
Height (inches):		2-5	4-8
Density:		Medium	Medium
Weed 4 Code:		AMBTR	AMBTR
Stage (leaves):		2-6	4-20
Height (inches):		3-5	4-40
Density:		High	High
Weed 5 Code:		ABUTH	ABUTH
Stage (leaves):		Coty-3	3-8
Height (inches):		0-2	4-20
Density:		Low	Medium
Weed 6 Code:		AMATA	AMATA
Stage (leaves):		Coty-1.5	6-18
Height (inches):		0-4	3-24
Density:		Low	Medium

APPLICATION EQUIPMENT

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

NOTES:

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Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

ZEAMX ZEAMX ZEAMX ZEAMX ZEAMX
 Moisture Yield Injury Injury Injury
 Percent bu/A Percent Percent Percent
 10-2-07 10-2-07 6-11-07 6-18-07 7-9-07
 14 DAE 0 DA-C 21 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED						EPP14	A		0 e	0 a	0 a	0 a	
2	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	EPP14	A	21.1	ab	33 de	0 a	0 a	0 a
2	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
2	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
3	AATREX	90	WG	2 lb ai/a	2.22	lb/a	EPP14	A	21.6	a	36 de	0 a	0 a	0 a
3	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
3	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
4	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	EPP14	A	19.1	bc	76 cd	0 a	0 a	0 a
4	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	EPP14	A						
4	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
4	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
5	DEGREE XTRA	4	L	1.5 lb ai/a	1.5	qt/a	EPP14	A	17.8	cd	23 e	0 a	0 a	0 a
5	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
5	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
6	DEGREE XTRA	4	L	3 lb ai/a	3	qt/a	EPP14	A	17.7	cd	97 c	0 a	0 a	0 a
6	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
6	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
7	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	EPP14	A	18.0	cd	116 bc	0 a	0 a	0 a
7	BALANCE PRO	4	SC	0.047 lb ai/a	1.5	fl oz/a	EPP14	A						
7	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
7	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
8	GF-1885	4.25	SE	0.93 lb ai/a	1.75	pt/a	EPP14	A	17.6	cd	100 c	0 a	0 a	0 a
8	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
8	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
9	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	16.1	d	87 c	0 a	0 a	0 a
9	NONTREATED						PRE	B						
10	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	16.3	d	150 ab	0 a	0 a	0 a
10	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	PRE	B						
10	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
10	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
11	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	16.4	d	156 ab	0 a	0 a	0 a
11	AATREX	90	WG	2 lb ai/a	2.22	lb/a	PRE	B						
11	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
11	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
12	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	17.6	cd	153 ab	0 a	0 a	0 a
12	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	PRE	B						
12	PRINCEP	90	WG	1.0 lb ai/a	1.11	lb/a	PRE	B						
12	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
12	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
13	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	16.8	cd	145 ab	0 a	0 a	0 a
13	DEGREE XTRA	4	L	1.5 lb ai/a	1.5	qt/a	PRE	B						
13	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
13	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
14	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	17.1	cd	155 ab	0 a	0 a	0 a
14	DEGREE XTRA	4	L	3 lb ai/a	3	qt/a	PRE	B						
14	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
14	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
15	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	16.7	d	160 a	0 a	0 a	0 a
15	AATREX	90	WG	1.0 lb ai/a	1.11	lb/a	PRE	B						
15	BALANCE PRO	4	SC	0.047 lb ai/a	1.5	fl oz/a	PRE	B						
15	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
15	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
16	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7	fl oz/a	PRE-IFND	B	17.4	cd	175 a	0 a	0 a	0 a
16	GF-1885	4.25	SE	0.93 lb ai/a	1.75	pt/a	PRE	B						
16	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3	fl oz/a	V6	C						
16	AMS	100	DRY	2.0 % w/w	17	lb/100 gal	V6	C						
17	WEED FREE								16.4	d	181 a	0 a	0 a	0 a
LSD (P=.05)									2.33		43.0	0.0	0.0	0.0
Replicate F									1.156		0.682	0.000	0.000	0.000
Replicate Prob(F)									0.3369		0.5676	1.0000	1.0000	1.0000
Treatment F									3.904		14.743	0.000	0.000	0.000
Treatment Prob(F)									0.0002		0.0001	1.0000	1.0000	1.0000

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

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Weed Code	SETFA	SETFA	SETFA	SETFA	SETFA
Crop Code					
Rating Data Type					
Rating Unit	Control	Control	Control	Plants	Seeding
Rating Date	Percent	Percent	Percent	0.5m2	Percent
Trt-Eval Interval	6-18-07	7-9-07	9-27-07	9-27-07	9-27-07
	0 DA-C	21 DA-C	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	0 h	0 h	0 g	0.9 bcd	13 cd
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	18 g	81 f	88 e	0.0 d	0 d
2	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
3	AATREX	90	WG	2	lb ai/a	2.22	lb/a	EPP14	A	23 f	85 e	90 de	0.0 d	0 d
3	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	38 e	89 d	93 cd	0.0 d	0 d
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A					
4	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
5	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	EPP14	A	95 abc	97 ab	98 a	0.0 d	0 d
5	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
6	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	EPP14	A	99 ab	99 a	99 a	0.0 d	0 d
6	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	71 d	91 cd	93 cd	0.9 bcd	38 a-d
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	EPP14	A					
7	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
8	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	EPP14	A	91 c	93 bc	93 cd	0.4 cd	13 cd
8	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
9	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0 h	48 g	55 f	2.4 a	75 a
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 bc	91 cd	91 cd	2.1 ab	50 abc
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
11	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 abc	93 bc	94 bc	1.6 abc	38 a-d
11	AATREX	90	WG	2	lb ai/a	2.22	lb/a	PRE	B					
11	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
12	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	97 ab	97 ab	95 bc	1.0 a-d	63 ab
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
13	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	97 ab	99 a	99 a	0.5 cd	25 bcd
13	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	PRE	B					
13	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
14	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	99 a	99 a	99 a	0.1 d	13 cd
14	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	PRE	B					
14	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
15	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	98 ab	99 a	97 ab	1.0 a-d	63 ab
15	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
15	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	B					
15	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
16	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	98 ab	98 a	97 ab	0.8 bcd	31 bcd
16	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	PRE	B					
16	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
17	WEED FREE									99 a	99 a	99 a	0.0 d	0 d
LSD (P=.05)										4.0	3.6	3.7	1.42	39.1
Replicate F										0.667	1.910	1.018	0.162	0.635
Replicate Prob(F)										0.5762	0.1406	0.3929	0.9214	0.5964
Treatment F										735.288	397.141	353.817	2.357	3.510
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0113	0.0004

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

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	PANDI				
										Control Percent	Control Percent	Control Percent	Plants 0.5m2	Seeding Percent
										6-18-07	7-9-07	9-27-07	9-27-07	9-27-07
										0 DA-C	21 DA-C	EOS	EOS	EOS
1	NONTREATED							EPP14	A	0 i	0 i	0 g	1.5 bc	13 cd
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	25 h	51 g	64 e	6.1 a	54 bc
2	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
3	AATREX	90	WG	2	lb ai/a	2.22	lb/a	EPP14	A	28 h	58 f	68 de	2.5 bc	50 bc
3	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	33 g	60 f	71 d	2.0 bc	63 ab
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A					
4	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
5	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	EPP14	A	91 bc	90 cd	93 abc	0.9 bc	25 bcd
5	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
6	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	EPP14	A	96 ab	95 ab	96 ab	0.3 c	13 cd
6	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	66 f	80 e	88 c	0.6 bc	38 bcd
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	EPP14	A					
7	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
8	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	EPP14	A	81 de	90 cd	91 bc	0.3 c	13 cd
8	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
9	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0 i	35 h	50 f	3.8 ab	100 a
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	79 e	89 d	88 c	0.9 bc	50 bc
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
11	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	80 e	90 bcd	91 bc	0.5 c	13 cd
11	AATREX	90	WG	2	lb ai/a	2.22	lb/a	PRE	B					
11	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
12	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	86 d	94 a-d	93 abc	0.3 c	25 bcd
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
13	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	93 bc	99 a	99 a	0.1 c	13 cd
13	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	PRE	B					
13	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
14	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	96 abc	99 a	99 a	0.1 c	13 cd
14	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	PRE	B					
14	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
15	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	91 c	96 a	97 ab	1.4 bc	38 bcd
15	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
15	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	B					
15	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
16	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	93 bc	95 abc	97 ab	0.0 c	0 d
16	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	PRE	B					
16	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
17	WEED FREE									99 a	99 a	99 a	0.0 c	0 d
LSD (P=.05)										5.0	5.3	6.6	3.15	42.2
Replicate F										3.811	1.830	5.302	3.036	1.730
Replicate Prob(F)										0.0158	0.1544	0.0031	0.0380	0.1733
Treatment F										403.105	225.960	123.143	2.164	3.181
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0202	0.0010

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

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	CYPES	CYPES	CYPES	CYPES	CYPES
Crop Code					
Rating Data Type	Control	Control	Control	Plants	Seeding
Rating Unit	Percent	Percent	Percent	0.5m2	Percent
Rating Date	6-18-07	7-9-07	9-27-07	9-27-07	9-27-07
Trt-Eval Interval	0 DA-C	21 DA-C	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	0 i	0 k	0 h	0.0 c	0 b
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	53 h	79 gh	90 de	0.0 c	0 b
2	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
3	AATREX	90	WG	2	lb ai/a	2.22	lb/a	EPP14	A	58 gh	83 fg	91 de	0.0 c	0 b
3	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	60 fg	84 efg	93 cd	0.0 c	0 b
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A					
4	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
5	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	EPP14	A	74 bc	85 def	93 cd	0.0 c	0 b
5	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
6	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	EPP14	A	74 bc	90 bcd	96 abc	0.0 c	0 b
6	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	61 fg	75 hi	88 ef	0.0 c	0 b
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	EPP14	A					
7	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
8	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	EPP14	A	61 fg	71 i	84 f	0.0 c	0 b
8	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
9	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0 i	63 j	78 g	0.0 c	0 b
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	66 def	89 b-e	93 cd	0.6 bc	0 b
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
11	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	69 cde	90 bcd	93 bcd	2.8 a	8 ab
11	AATREX	90	WG	2	lb ai/a	2.22	lb/a	PRE	B					
11	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
12	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	64 efg	88 c-f	93 cd	1.0 bc	0 b
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
13	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	75 bc	91 bc	93 bcd	1.3 bc	0 b
13	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	PRE	B					
13	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
14	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	79 b	94 ab	95 abc	1.5 ab	3 ab
14	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	PRE	B					
14	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
15	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	71 cd	93 bc	97 ab	0.5 bc	4 ab
15	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
15	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	B					
15	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
16	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	73 bcd	89 b-e	93 cd	1.6 ab	13 a
16	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	PRE	B					
16	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
17	WEED FREE									99 a	99 a	99 a	0.0 c	0 b
LSD (P=.05)										6.8	5.9	3.8	1.29	11.2
Replicate F										0.703	2.405	4.621	0.212	0.280
Replicate Prob(F)										0.5547	0.0789	0.0064	0.8877	0.8394
Treatment F										111.065	120.020	297.741	3.280	0.831
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0007	0.6462

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

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 Location: Belleville Research Center
 Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMBTR				
									Control Percent	Control Percent	Control Percent	Plants 0.5m2	Seeding Percent
									6-18-07	7-9-07	9-27-07	9-27-07	9-27-07
									0 DA-C	21 DA-C	EOS	EOS	EOS
1	NONTREATED						EPP14	A	0 h	0 f	0 g	9.9 a	100 a
2	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		EPP14	A	49 f	53 d	46 e	4.0 bc	75 abc
2	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
2	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
3	AATREX	90	WG	2 lb ai/a	2.22 lb/a		EPP14	A	60 de	61 c	61 d	2.1 c-g	88 ab
3	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
3	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
4	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		EPP14	A	59 de	63 c	70 c	2.3 c-f	50 cde
4	PRINCEP	90	WG	1.0 lb ai/a	1.11 lb/a		EPP14	A					
4	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
4	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
5	DEGREE XTRA	4	L	1.5 lb ai/a	1.5 qt/a		EPP14	A	28 g	36 e	48 e	4.3 b	88 ab
5	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
5	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
6	DEGREE XTRA	4	L	3 lb ai/a	3 qt/a		EPP14	A	64 d	59 cd	68 cd	2.5 b-e	56 bcd
6	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
6	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
7	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		EPP14	A	75 c	81 b	79 b	1.8 d-h	54 b-e
7	BALANCE PRO	4	SC	0.047 lb ai/a	1.5 fl oz/a		EPP14	A					
7	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
7	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
8	GF-1885	4.25	SE	0.93 lb ai/a	1.75 pt/a		EPP14	A	55 ef	54 d	61 d	3.1 bcd	88 ab
8	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
8	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
9	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	0 h	30 e	35 f	4.3 b	100 a
9	NONTREATED						PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	89 b	93 a	95 a	0.5 fgh	13 fg
10	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
10	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
11	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	91 ab	95 a	96 a	0.3 gh	13 fg
11	AATREX	90	WG	2 lb ai/a	2.22 lb/a		PRE	B					
11	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
11	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
12	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	90 b	96 a	96 a	0.8 e-h	38 def
12	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		PRE	B					
12	PRINCEP	90	WG	1.0 lb ai/a	1.11 lb/a		PRE	B					
12	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
12	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
13	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	94 ab	95 a	96 a	0.5 fgh	19 efg
13	DEGREE XTRA	4	L	1.5 lb ai/a	1.5 qt/a		PRE	B					
13	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
13	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
14	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	95 ab	99 a	99 a	0.0 h	0 g
14	DEGREE XTRA	4	L	3 lb ai/a	3 qt/a		PRE	B					
14	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
14	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
15	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	95 ab	99 a	99 a	0.0 h	0 g
15	AATREX	90	WG	1.0 lb ai/a	1.11 lb/a		PRE	B					
15	BALANCE PRO	4	SC	0.047 lb ai/a	1.5 fl oz/a		PRE	B					
15	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
15	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
16	ROUNDUP W-MAX	4.5	SL	0.375 lb ae/a	10.7 fl oz/a		PRE-IFND	B	94 ab	98 a	98 a	0.4 fgh	25 d-g
16	GF-1885	4.25	SE	0.93 lb ai/a	1.75 pt/a		PRE	B					
16	ROUNDUP W-MAX	4.5	SL	0.75 lb ae/a	21.3 fl oz/a		V6	C					
16	AMS	100	DRY	2.0 % w/w	17 lb/100 gal		V6	C					
17	WEED FREE								99 a	99 a	99 a	0.0 h	0 g
LSD (P=.05)									8.2	6.3	8.4	1.92	35.4
Replicate F									0.765	0.681	0.883	2.269	1.377
Replicate Prob(F)									0.5195	0.5682	0.4568	0.0924	0.2610
Treatment F									128.828	183.581	95.878	14.041	8.900
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

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

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code					
Rating Data Type	Control	Control	Control	Plants	Seeding
Rating Unit	Percent	Percent	Percent	0.5m2	Percent
Rating Date	6-18-07	7-9-07	9-27-07	9-27-07	9-27-07
Trt-Eval Interval	0 DA-C	21 DA-C	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	0 d	0 h	0 g	0.0 b	0 b
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	61 c	66 f	81 e	0.3 b	13 ab
2	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
3	AATREX	90	WG	2	lb ai/a	2.22	lb/a	EPP14	A	70 b	70 ef	86 de	0.3 b	13 ab
3	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	70 b	76 e	90 cd	0.0 b	0 b
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A					
4	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
5	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	EPP14	A	65 bc	73 ef	84 e	0.1 b	13 ab
5	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
6	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	EPP14	A	61 c	74 e	90 cd	0.3 b	25 a
6	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	91 a	90 cd	92 bc	0.1 b	0 b
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	EPP14	A					
7	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
8	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	EPP14	A	91 a	90 bcd	95 abc	0.0 b	0 b
8	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
9	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0 d	43 g	70 f	0.9 a	17 ab
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	92 a	86 d	95 abc	0.0 b	0 b
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
11	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 a	90 bcd	97 ab	0.0 b	0 b
11	AATREX	90	WG	2	lb ai/a	2.22	lb/a	PRE	B					
11	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
12	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	93 a	90 bcd	96 ab	0.0 b	0 b
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
12	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
13	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 a	88 cd	95 ab	0.0 b	0 b
13	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	PRE	B					
13	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
14	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	96 a	95 abc	97 a	0.0 b	0 b
14	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	PRE	B					
14	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
15	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 a	95 abc	97 a	0.0 b	0 b
15	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B					
15	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	B					
15	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
16	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	93 a	97 ab	99 a	0.0 b	0 b
16	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	PRE	B					
16	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C					
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C					
17	WEED FREE									99 a	99 a	99 a	0.0 b	0 b
LSD (P=.05)										8.3	6.8	5.0	0.49	24.6
Replicate F										8.969	7.521	2.141	0.362	0.678
Replicate Prob(F)										0.0001	0.0003	0.1073	0.7805	0.5695
Treatment F										114.354	108.655	176.365	1.642	0.847
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0937	0.6287

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

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	AMATA	AMATA	AMATA	AMATA	AMATA	XANST	XANST	IPOSS	IPOSS
Crop Code									
Rating Data Type	Control	Control	Control	Plants	Seeding	Plants	Seeding	Plants	Seeding
Rating Unit	Percent	Percent	Percent	0.5m2	Percent	0.5m2	Percent	0.5m2	Percent
Rating Date	6-18-07	7-9-07	9-27-07	9-27-07	9-27-07	9-27-07	9-27-07	9-27-07	9-27-07
Trt-Eval Interval	0 DA-C	21 DA-C	EOS	EOS	EOS	EOS	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	NONTREATED							EPP14	A	0 f	0 h	0 f	0.0 c	0 c	0.0 b	0 b	0.0 c	0 b
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	60 e	56 f	68 d	1.1 ab	50 ab	0.0 b	0 b	0.3 c	13 ab
2	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
3	AATREX	90	WG	2	lb ai/a	2.22	lb/a	EPP14	A	60 e	64 e	70 d	1.4 a	69 a	0.0 b	0 b	0.0 c	0 b
3	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	55 e	61 ef	74 d	0.8 abc	25 abc	0.0 b	0 b	0.4 c	13 ab
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A									
4	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
5	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	EPP14	A	97 ab	99 a	99 a	0.0 c	0 c	0.0 b	0 b	0.8 abc	16 ab
5	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
6	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	EPP14	A	98 ab	99 a	99 a	0.1 bc	13 bc	0.3 b	0 b	0.6 abc	25 a
6	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	84 d	86 cd	92 abc	0.8 abc	38 abc	0.0 b	0 b	0.3 c	0 b
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	EPP14	A									
7	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
8	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	EPP14	A	93 bc	91 bc	95 ab	0.0 c	0 c	0.4 ab	0 b	0.3 c	0 b
8	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
9	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0 f	40 g	50 e	0.9 abc	25 abc	0.0 b	0 b	0.4 c	0 b
9	NONTREATED							PRE	B									
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	90 c	84 d	88 c	0.3 bc	25 abc	0.0 b	0 b	0.5 bc	0 b
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B									
10	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
11	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	91 c	89 cd	94 abc	0.1 bc	13 bc	0.1 b	13 ab	0.3 c	0 b
11	AATREX	90	WG	2	lb ai/a	2.22	lb/a	PRE	B									
11	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
12	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	90 c	86 cd	92 bc	1.0 abc	63 a	0.0 b	0 b	0.6 abc	6 ab
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B									
12	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B									
12	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
13	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 abc	99 a	98 ab	0.3 bc	25 abc	0.9 a	16 a	0.5 bc	21 ab
13	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	PRE	B									
13	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
14	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	97 ab	99 a	99 a	0.0 c	0 c	0.0 b	0 b	0.6 abc	4 ab
14	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	PRE	B									
14	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
15	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	97 ab	99 a	99 ab	0.3 bc	25 abc	0.3 b	25 a	1.4 a	25 a
15	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B									
15	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	B									
15	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
16	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	95 abc	97 ab	98 ab	0.4 abc	25 abc	0.0 b	0 b	1.3 ab	13 ab
16	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	PRE	B									
16	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C									
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C									
17	WEED FREE									99 a	99 a	99 a	0.0 c	0 c	0.0 b	0 b	0.0 c	0 b
LSD (P=.05)										5.7	6.6	6.9	1.02	47.6	0.50	15.0	0.86	23.1
Replicate F										0.127	0.418	2.002	0.727	0.318	2.949	0.834	1.597	1.559
Replicate Prob(F)										0.9435	0.7412	0.1262	0.5409	0.8122	0.0420	0.4819	0.2025	0.2116
Treatment F										255.849	140.969	114.951	1.639	1.689	1.691	1.994	1.693	1.328
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0945	0.0819	0.0815	0.0336	0.0809	0.2196

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

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	DIGSA	DIGSA	CHEAL	CHEAL
Crop Code				
Rating Data Type	Plants	Seeding	Plants	Seeding
Rating Unit	0.5m2	Percent	0.5m2	Percent
Rating Date	9-27-07	9-27-07	9-27-07	9-27-07
Trt-Eval Interval	EOS	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED							EPP14	A	0.6 ab	13 a	0.0 b	0 a
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	0.0 b	0 a	0.0 b	0 a
2	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
3	AATREX	90	WG	2	lb ai/a	2.22	lb/a	EPP14	A	0.3 b	13 a	0.0 b	0 a
3	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	0.0 b	0 a	0.0 b	0 a
4	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A				
4	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
5	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	EPP14	A	0.0 b	0 a	0.0 b	0 a
5	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
6	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	EPP14	A	0.0 b	0 a	0.1 b	0 a
6	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	0.6 ab	13 a	0.0 b	0 a
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	EPP14	A				
7	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
8	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	EPP14	A	0.0 b	0 a	1.8 a	25 a
8	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
9	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0.0 b	0 a	0.4 b	13 a
9	NONTREATED							PRE	B				
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	1.0 ab	25 a	0.4 b	25 a
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B				
10	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
11	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0.0 b	0 a	0.4 b	13 a
11	AATREX	90	WG	2	lb ai/a	2.22	lb/a	PRE	B				
11	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
12	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0.9 ab	21 a	0.0 b	0 a
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B				
12	PRINCEP	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B				
12	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
13	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0.0 b	0 a	0.8 ab	25 a
13	DEGREE XTRA	4	L	1.5	lb ai/a	1.5	qt/a	PRE	B				
13	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
14	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0.1 b	13 a	0.0 b	0 a
14	DEGREE XTRA	4	L	3	lb ai/a	3	qt/a	PRE	B				
14	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
15	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0.3 b	13 a	0.3 b	13 a
15	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	B				
15	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	B				
15	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
16	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	1.8 a	25 a	0.1 b	13 a
16	GF-1885	4.25	SE	0.93	lb ai/a	1.75	pt/a	PRE	B				
16	ROUNDUP W-MAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V6	C				
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	V6	C				
17	WEED FREE									0.0 b	0 a	0.0 b	0 a

Residual Herbicide Rate and Timing Study in Glyphosate-Resistant Corn.

Project Code: 07-52-ME90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	DIGSA	DIGSA	CHEAL	CHEAL
Crop Code				
Rating Data Type	Plants	Seeding	Plants	Seeding
Rating Unit	0.5m2	Percent	0.5m2	Percent
Rating Date	9-27-07	9-27-07	9-27-07	9-27-07
Trt-Eval Interval	EOS	EOS	EOS	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code
LSD (P=.05)									
Replicate F				3.429		6.707		1.669	1.836
Replicate Prob(F)				0.0243		0.0007		0.1861	0.1532
Treatment F				0.956		1.136		0.855	0.705
Treatment Prob(F)				0.5158		0.3512		0.6210	0.7749

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

Trial Comments

1. Protocol: SIU.
2. Ratings:
 - Crop injury 14 days after emergence
 - At POST V6 timing (all plots) - crop injury and visual weed control; also weed counts at two locations in each plot and count weeds by species and the number in various size categories 0-3", 3-6", 6-9", 9-12", etc.
 - At 21 d after POST - crop injury and visual weed control
 - At harvest - visual weed control and weed counts as described above
3. Yield.
4. Entire area is tilled prior to EPP14 application. Apply the EPP14 treatments, plant 14 days later.
 - PRE-IFND = The PRE treatments should include glyphosate for control of any emerged weeds at planting, if needed.
5. The V6 application could be applied using a 2.5 gallon spray tank, but must be a 7.5 ft boom, and skip the nontreateds.
6. Weedfree plots can be multiple glyphosate applications as needed.
7. GF-1885 4.25 SE = Surestart.
8. Harvested 10-2-07, (2) 30 inch rows by 22 ft.