

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

Project Code: 06-51W-S120 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: 10-11-06

**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. AMATA	waterhemp, common	Amaranthus rudis Sauer
6. ABUTH	velvetleaf	Abutilon theophrasti Medicus
7. CHEAL	lambsquarters, common	Chenopodium album L.
8. IPOSS	morningglory, species	Ipomoea sp.
9. XANST	cocklebur, common	Xanthium strumarium L.

Crop 1: ZEAMX corn, field Variety: 33K44  
Planting Method: Seeded Planting Date: 5-8-06  
Rate: 28000 S/A Depth: 1.5 IN  
Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 27 FT Reps: 4  
Tillage Type: Reduced-Till Study Design: Randomized complete block  
Previous Crop, Year: ZEAMX, 2005  
Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 100 LB/A

Soil Name: Weir % OM: 2.2 pH: 6.5 CEC: 11  
Texture: Silt loam Fert. Level: P1: 94 LB/A, K: 396 LB/A

**APPLICATION DESCRIPTION**

	A	B	C
Application Date:	4-24-06	5-9-06	6-13-06
Time of Day:	13:00	14:30	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	EPP14	PRE	V6
Applic. Placement:	BROSUI	BROFOL	BROFOL
Air Temp., Unit:	74 F	70 F	70 F
% Relative Humidity:	50	94	70
Wind Velocity, Unit:	3-5 MPH	1-3 MPH	3-5 MPH
Soil Moisture:	NORMAL	NORMAL	NORMAL

**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
Stage(leaves):			2-10
Height(inches):			0-10
Density:			High
Weed 2 Code:			PANDI
Stage(leaves):			2-10
Height(inches):			0-10
Density:			High
Weed 3 Code:			CYPES
Stage(leaves):			2-12
Height(inches):			0-10
Density:			Medium
Weed 4 Code:			AMBTR
Stage(leaves):			2-10
Height(inches):			0-8
Density:			Medium
Weed 5 Code:			AMATA
Stage(leaves):			2-14
Height(inches):			0-5
Density:			Medium
Weed 6 Code:			ABUTH
Stage(leaves):			2-6
Height(inches):			0-5
Density:			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  
 10-6-06 10-6-06 5-29-06 6-13-06 7-4-06  
 14 DAE 0 DA-C 21 DA-C

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	16.2	9	0	0	0
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	15.0	140	0	0	0
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	15.1	137	0	0	0
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	15.0	142	0	0	0
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	15.1	152	0	0	0
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	15.4	158	0	0	0
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	14.8	139	0	0	0
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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	15.1	153	0	0	0
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	14.9	32	0	0	0
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	14.9	149	0	0	0
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	14.8	153	0	0	0
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	14.9	163	0	0	0
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	15.2	153	0	0	0
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	15.1	160	0	0	0
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	15.4	158	0	0	0
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	15.6	153	0	0	0
16	GF-1834	4.07	EW	1.75	pt/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									15.3	150	0	0	0
LSD (P=.05)										1.07	18.6	0.0	0.0	0.0
Replicate F										0.072	4.317	0.000	0.000	0.000
Replicate Prob(F)										0.9749	0.0090	1.0000	1.0000	1.0000
Treatment F										0.831	45.850	0.000	0.000	0.000
Treatment Prob(F)										0.6454	0.0001	1.0000	1.0000	1.0000

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	SETFA 6-13-06 0 DA-C	SETFA 7-4-06 21 DA-C	SETFA 10-4-06 EOS	SETFA 10-4-06 EOS	SETFA 10-4-06 EOS
1	NONTREATED							EPP14	A	0	0	0	100	94
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	48	99	99	0	
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	46	99	99	0	
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	53	99	99	13	100
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	93	99	99	13	100
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	97	99	99	0	
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	65	99	99	0	
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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	80	99	99	0	
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	11	0	0	100	100
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	76	99	99	13	100
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	75	99	99	13	100
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	84	99	99	0	
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	96	99	99	0	
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	99	99	0	
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	99	99	0	
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	99	99	13	100
16	GF-1834	4.07	EW	1.75	pt/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	99	99	0	
LSD (P=.05)										12.4	0.0	0.5	18.9	26.0
Replicate F										0.757	0.000	1.846	1.895	0.167
Replicate Prob(F)										0.5239	1.0000	0.1514	0.1431	0.9124
Treatment F										49.303	0.000	31792.605	23.947	0.167
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	0.9692

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Weed Code									PANDI	PANDI	PANDI	PANDI	PANDI	
Crop Code									Control	Control	Control	Presence	Seeding	
Rating Data Type									Percent	Percent	Percent	Percent	Percent	
Rating Unit									6-13-06	7-4-06	10-4-06	10-4-06	10-4-06	
Rating Date									0 DA-C	21 DA-C	EOS	EOS	EOS	
Trt-Eval Interval														
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	0	0	0	75	100
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	44	99	98	0	
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	41	98	98	0	
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	50	99	96	25	100
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	93	99	99	13	100
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	97	99	99	13	100
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	59	99	98	25	100
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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	78	99	99	0	
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	11	0	0	100	100
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	64	99	98	13	100
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	65	99	98	25	100
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	79	99	99	0	
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	90	99	99	0	
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	94	99	99	0	
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	80	98	98	25	100
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	90	93	98	25	100
16	GF-1834	4.07	EW	1.75	pt/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	99	99	0	
LSD (P=.05)										12.4	1.6	1.3	28.7	0.0
Replicate F										1.542	2.138	0.578	1.065	0.000
Replicate Prob(F)										0.2157	0.1077	0.6322	0.3729	1.0000
Treatment F										45.846	3363.789	5068.884	7.768	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000

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

Project Code: 06-51W-S120 Location: Belleville Research Center  
 Investigator: Bryan Young

Weed Code										CYPES	CYPES	CYPES	CYPES	CYPES
Crop Code										Control	Control	Control	Presence	Seeding
Rating Data Type										Percent	Percent	Percent	Percent	Percent
Rating Unit										6-13-06	7-4-06	10-4-06	10-4-06	10-4-06
Rating Date										0 DA-C	21 DA-C	EOS	EOS	EOS
Trt-Eval Interval														
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	0	0	0	0	
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	63	88	97	25	0
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	54	79	98	38	25
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	65	79	96	25	0
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	84	89	98	13	0
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	85	90	98	13	0
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	64	84	98	0	
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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	74	84	98	25	0
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	28	0	0	0	
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	59	80	97	38	0
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	74	84	98	38	0
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	80	88	98	50	0
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	80	84	99	0	
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	85	90	98	25	0
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	78	81	98	0	
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	84	91	98	13	0
16	GF-1834	4.07	EW	1.75	pt/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	99	99	0	
LSD (P=.05)										12.2	7.4	1.7	35.9	24.6
Replicate F										6.490	16.768	3.506	5.734	0.350
Replicate Prob(F)										0.0009	0.0001	0.0222	0.0020	0.7164
Treatment F										31.248	125.460	3048.181	1.736	1.050
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0715	0.4895

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

Project Code: 06-51W-S120 Location: Belleville Research Center  
 Investigator: Bryan Young

Weed Code									AMBTR	AMBTR	AMBTR	AMBTR	AMBTR	
Crop Code									Control	Control	Control	Presence	Seeding	
Rating Data Type									Percent	Percent	Percent	Percent	Percent	
Rating Unit									6-13-06	7-4-06	10-4-06	10-4-06	10-4-06	
Rating Date									0 DA-C	21 DA-C	EOS	EOS	EOS	
Trt-Eval Interval														
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code					
1	NONTREATED							EPP14	A	0	0	0	100	100
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	80	89	96	38	100
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	80	85	97	38	100
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	85	90	97	13	100
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	88	91	97	13	100
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	84	89	97	25	100
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	85	90	95	50	92
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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	79	81	95	50	50
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	45	0	0	100	100
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	85	92	99	0	
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	85	93	97	13	100
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	92	98	25	50
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	88	93	97	38	100
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	86	92	98	38	67
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	93	92	98	25	100
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	91	91	98	13	100
16	GF-1834	4.07	EW	1.75	pt/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	99	99	0	
LSD (P=.05)										11.6	9.3	2.8	47.2	50.9
Replicate F										0.155	0.563	0.172	0.045	0.392
Replicate Prob(F)										0.9257	0.6421	0.9145	0.9872	0.7606
Treatment F										32.907	86.067	1055.471	3.135	1.229
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0011	0.3524

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

Project Code: 06-51W-S120 Location: Belleville Research Center  
 Investigator: Bryan Young

Weed Code	AMATA	AMATA	AMATA	AMATA	AMATA
Crop Code	Control	Control	Control	Presence	Seeding
Rating Data Type	Percent	Percent	Percent	Percent	Percent
Rating Unit	6-13-06	7-4-06	10-4-06	10-4-06	10-4-06
Rating Date	0 DA-C	21 DA-C	EOS	EOS	EOS
Trt-Eval Interval					

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMATA	AMATA	AMATA	AMATA	AMATA
1	NONTREATED							EPP14	A	0	0	0	38	100
2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	88	98	99	0	
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	86	96	98	13	100
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	93	98	99	0	
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	99	98	99	0	
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	99	99	0	
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	95	97	98	25	50
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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	96	98	99	0	
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	31	0	0	38	100
9	NONTREATED							PRE	B					
10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	97	96	99	0	
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	97	96	99	13	100
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	99	97	99	0	
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	99	99	99	0	
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	99	99	0	
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	99	98	99	13	100
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	99	94	99	0	
16	GF-1834	4.07	EW	1.75	pt/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	99	99	0	
LSD (P=.05)										4.2	3.5	0.9	27.4	0.0
Replicate F										1.504	4.559	2.767	3.833	0.000
Replicate Prob(F)										0.2255	0.0069	0.0519	0.0154	1.0000
Treatment F										343.672	714.913	11947.447	1.900	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0443	1.0000

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

Project Code: 06-51W-S120 Location: Belleville Research Center  
 Investigator: Bryan Young

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	ABUTH	ABUTH	ABUTH	ABUTH	ABUTH	CHEAL	CHEAL
																Control Percent	Control Percent	Control Percent	Presence Percent	Seeding Percent	Presence Percent	Seeding Percent
																6-13-06	7-4-06	10-4-06	10-4-06	10-4-06	10-4-06	10-4-06
																0 DA-C	21 DA-C	EOS	EOS	EOS	EOS	EOS
						1	NONTREATED							EPP14	A	0	0	0	0	0	13	100
						2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	81	98	99	0	0	13	100
						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	84	97	99	0	0	13	100
						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	85	95	99	0	0	0	0
						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	90	95	99	0	0	0	0
						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	85	97	99	0	0	0	0
						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	85	93	99	0	0	0	0
						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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	91	95	99	0	0	0	0
						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	29	0	0	0	0	0	0
						9	NONTREATED							PRE	B							
						10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	85	93	99	0	0	0	0
						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	84	95	99	0	0	0	0
						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	88	94	99	0	0	0	0
						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	86	96	99	0	0	0	0
						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	90	98	99	0	0	0	0
						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	96	95	99	0	0	0	0
						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	97	99	0	0	0	0
						16	GF-1834	4.07	EW	1.75	pt/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	99	99	0	0	0	0
						LSD (P=.05)										8.2	4.6	0.0	0.0		14.9	
						Replicate F										1.108	0.263	0.000	0.000		1.239	
						Replicate Prob(F)										0.3552	0.8518	1.0000	1.0000		0.3058	
						Treatment F										79.036	396.410	0.000	0.000		0.887	
						Treatment Prob(F)										0.0001	0.0001	1.0000	1.0000		0.5866	

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

Project Code: 06-51W-S120 Location: Belleville Research Center  
 Investigator: Bryan Young

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	IPOSS	IPOSS	XANST	XANST
																Presence Percent 10-4-06 EOS	Seeding Percent 10-4-06 EOS	Presence Percent 10-4-06 EOS	Seeding Percent 10-4-06 EOS
						1	NONTREATED							EPP14	A	0		0	.
						2	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	EPP14	A	13	100	0	.
						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	25	0	0	.
						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	13	100	0	.
						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	13	0	0	.
						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		13	100
						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	13	0	0	.
						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-1834	100	L	1.75	pt/a	1.75	pt/a	EPP14	A	0		0	.
						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	.
						9	NONTREATED							PRE	B				
						10	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE-IFND	B	0		0	.
						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	.
						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	25	50	0	.
						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	38	100	0	.
						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	13	100	0	.
						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	13	0	0	.
						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	13	100	0	.
						16	GF-1834	4.07	EW	1.75	pt/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	.

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

Project Code: 06-51W-S120 Location: Belleville Research Center  
 Investigator: Bryan Young

Weed Code	IPOSS	IPOSS	XANST	XANST
Crop Code				
Rating Data Type	Presence	Seeding	Presence	Seeding
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	10-4-06	10-4-06	10-4-06	10-4-06
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)									
				34.6				8.7	
	Replicate F			1.089				1.000	
	Replicate Prob(F)			0.3628				0.4010	
	Treatment F			0.832				1.000	
	Treatment Prob(F)			0.6443				0.4727	

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. GF-1834 is listed as 100 L because we do not know the formulation at this time.
6. 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.
7. Weedfree plots can be multiple glyphosate applications as needed.
8. DAE = Days after crop emergence. DA-C = Days after V6 application. EOS = End of season.
  - Presence = The percentage of the eight sample points (4 reps x 2 samples/rep) in which the weed was present.
  - Seeding = The percentage of the weeds present which were seeding.
9. For weed control at harvest, improved control was due to downy mildew on weeds and shading which caused death to much of the previously present weeds.
10. For weed counts see 06-51W-S120-Counts.
11. Harvested 10-6-06, (2) 30 inch rows by 24 ft.