

Sequence, Lexar and Touchdown Combinations in No-till Glyphosate-Resistant Corn.

Project Code: 06-11C-E105 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: 8-15-06**Objective:**

To evaluate combinations of Touchdown with Sequence or Lexar applied PRE or POST in no-till glyphosate-resistant corn.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	AMATA waterhemp, common	Amaranthus rudis Sauer
3.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
4.	IPOSS morningglory, species	Ipomoea sp.

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:	28 FT	Reps:	4
Tillage Type:	No-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2005				
Field Prep./Maintenance:	N 150 LB/A, P205 0 LB/A, K20 0 LB/A				

Soil Name:	Ebbert	% OM:	2.3	pH:	5.8	CEC:	13
Texture:	Silt loam	Fert. Level:	P1: 84 LB/A, K: 456 LB/A				

APPLICATION DESCRIPTION

	A	B	C
Application Date:	5-1-06	5-8-06	5-30-06
Time of Day:	11:30	14:00	12:00
Application Method:	Spray	Spray	Spray
Application Timing:	EPP3-10	PRE	V2
Applic. Placement:	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	70 F	72 F	84 F
% Relative Humidity:	94	69	88
Wind Velocity, Unit:	3-5 MPH	5-6 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 V2-V3
Height, Unit:	NA NA	NA NA	4-6 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:			SETFA
Stage (leaves):			2-4
Height (inches):			4-6
Density:			Medium
Weed 2 Code:			AMATA
Stage (leaves):			2-6
Height (inches):			1-3
Density:			High
Weed 3 Code:			AMBEL
Stage (leaves):			4-6
Height (inches):			2-4
Density:			Medium
Weed 4 Code:			IPOSS
Stage (leaves):			2-4
Height (inches):			1-3
Density:			Low

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:

Sequence, Lexar and Touchdown Combinations in No-till Glyphosate-Resistant Corn.

Project Code: 06-11C-E105 Location: Belleville Research Center
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Weed Code										SETFA	SETFA	SETFA				
Crop Code										Control	Control	Control				
Rating Data Type										Percent	Percent	Percent				
Rating Unit										5-31-06	6-27-06	7-11-06				
Rating Date										1 DA-C	28 DA-C	42 DA-C				
Trt-Eval Interval										1 DA-C	28 DA-C	42 DA-C				
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	ZEAMX Moisture Percent 10-12-06	ZEAMX Yield bu/A 10-12-06	ZEAMX Injury Percent 5-17-06 6 DA-A	ZEAMX Injury Percent 5-31-06 1 DA-C	ZEAMX Injury Percent 6-27-06 28 DA-C	SETFA Control Percent 5-31-06 1 DA-C	SETFA Control Percent 6-27-06 28 DA-C	SETFA Control Percent 7-11-06 42 DA-C
1	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.5	24	0	0	0	0	0	0
1	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
2	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.6	77	0	0	0	90	34	30
2	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
2	SEQUENCE	5.25	EW	1.64 lb ai/a	2.5	pt/a	PRE	B								
3	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.7	67	0	0	0	90	45	31
3	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
3	SEQUENCE	5.25	EW	1.97 lb ai/a	3	pt/a	PRE	B								
4	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.9	141	0	0	0	88	84	85
4	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
4	SEQUENCE	5.25	EW	1.64 lb ai/a	2.5	pt/a	PRE	B								
4	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	V2	C								
5	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.8	146	0	0	0	95	86	84
5	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
5	SEQUENCE	5.25	EW	1.97 lb ai/a	3	pt/a	PRE	B								
5	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	V2	C								
6	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.8	121	0	0	0	89	43	40
6	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
6	LEXAR	3.7	L	2.78 lb ai/a	3.0	qt/a	PRE	B								
7	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	15.3	146	0	0	0	89	78	78
7	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
7	LEXAR	3.7	L	2.08 lb ai/a	2.25	qt/a	PRE	B								
7	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	V2	C								
8	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.9	159	0	0	0	0	96	95
8	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
8	SEQUENCE	5.25	EW	1.64 lb ai/a	2.5	pt/a	V2	C								
9	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.9	149	0	0	0	0	95	94
9	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
9	SEQUENCE	5.25	EW	1.97 lb ai/a	3.0	pt/a	V2	C								
10	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	15.2	166	0	0	0	0	96	94
10	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
10	LEXAR	3.7	L	2.08 lb ai/a	2.25	qt/a	V2	C								
10	TOUCHDOWN TOTAL	4.17	SC	0.78 lb ae/a	24	fl oz/a	V2	C								
11	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	15.2	153	0	0	0	0	99	99
11	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
11	EXPERT	4.88	SC	4.27 lb ai/a	3.5	qt/a	V2	C								
12	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.6	147	0	0	0	85	64	57
12	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
12	LEXAR	3.7	L	1.39 lb ai/a	1.5	qt/a	PRE	B								
12	LEXAR	3.7	L	1.39 lb ai/a	1.5	qt/a	V2	C								
13	GRAMOXONE INTEON	2	SL	0.75 lb ai/a	3	pt/a	EPP3-10	A	14.7	157	0	0	0	0	84	85
13	PRIME OIL COC	100	LIQ	1 % v/v	1	% v/v	EPP3-10	A								
13	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V2	C								
LSD (P=.05)									0.70	26.1	0.0	0.0	0.0	6.9	19.2	14.4
Replicate F									1.592	0.306	0.000	0.000	0.000	0.130	1.199	0.313
Replicate Prob(F)									0.2087	0.8210	1.0000	1.0000	1.0000	0.9418	0.3241	0.8161
Treatment F									1.051	22.597	0.000	0.000	0.000	371.474	20.466	40.230
Treatment Prob(F)									0.4278	0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Sequence, Lexar and Touchdown Combinations in No-till Glyphosate-Resistant Corn.

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						AMATA	AMATA	AMATA	AMBEL	AMBEL	AMBEL			
						Control	Control	Control	Control	Control	Control			
						Percent	Percent	Percent	Percent	Percent	Percent			
						5-31-06	6-27-06	7-11-06	5-31-06	6-27-06	7-11-06			
						1 DA-C	28 DA-C	42 DA-C	1 DA-C	28 DA-C	42 DA-C			
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	0	0	0			
1	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
2	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	84	38	33			
2	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
2	SEQUENCE	5.25 EW		1.64 lb ai/a	2.5 pt/a		PRE	B			23			
3	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	89	48	46			
3	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
3	SEQUENCE	5.25 EW		1.97 lb ai/a	3 pt/a		PRE	B			53			
4	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	89	83	81			
4	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
4	SEQUENCE	5.25 EW		1.64 lb ai/a	2.5 pt/a		PRE	B						
4	TOUCHDOWN TOTAL	4.17 SC		0.78 lb ae/a	24 fl oz/a		V2	C			99			
5	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	86	81	80			
5	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
5	SEQUENCE	5.25 EW		1.97 lb ai/a	3 pt/a		PRE	B						
5	TOUCHDOWN TOTAL	4.17 SC		0.78 lb ae/a	24 fl oz/a		V2	C			99			
6	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	98	90	90			
6	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
6	LEXAR	3.7 L		2.78 lb ai/a	3.0 qt/a		PRE	B			87			
7	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	98	90	89			
7	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
7	LEXAR	3.7 L		2.08 lb ai/a	2.25 qt/a		PRE	B						
7	TOUCHDOWN TOTAL	4.17 SC		0.78 lb ae/a	24 fl oz/a		V2	C			99			
8	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	0	98	99			
8	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
8	SEQUENCE	5.25 EW		1.64 lb ai/a	2.5 pt/a		V2	C			98			
9	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	0	98	98			
9	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
9	SEQUENCE	5.25 EW		1.97 lb ai/a	3.0 pt/a		V2	C			99			
10	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	0	99	99			
10	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
10	LEXAR	3.7 L		2.08 lb ai/a	2.25 qt/a		V2	C						
10	TOUCHDOWN TOTAL	4.17 SC		0.78 lb ae/a	24 fl oz/a		V2	C			99			
11	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	0	99	99			
11	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
11	EXPERT	4.88 SC		4.27 lb ai/a	3.5 qt/a		V2	C						
12	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	96	99	99			
12	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
12	LEXAR	3.7 L		1.39 lb ai/a	1.5 qt/a		PRE	B						
12	LEXAR	3.7 L		1.39 lb ai/a	1.5 qt/a		V2	C						
13	GRAMOXONE INTEON	2 SL		0.75 lb ai/a	3 pt/a		EPP3-10	A	0	94	92			
13	PRIME OIL COC	100 LIQ		1 % v/v	1 % v/v		EPP3-10	A						
13	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a	22 fl oz/a		V2	C			99			
LSD (P=.05)									5.0	20.4	18.4	4.0	20.6	19.2
Replicate F									3.863	0.385	0.058	1.516	0.501	0.153
Replicate Prob(F)									0.0171	0.7646	0.9815	0.2270	0.6840	0.9269
Treatment F									734.016	18.652	23.679	1216.822	26.139	25.375
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Sequence, Lexar and Touchdown Combinations in No-till Glyphosate-Resistant Corn.

Project Code: 06-11C-E105 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code						IPOSS	IPOSS	IPOSS				
Crop Code						Control	Control	Control				
Rating Data Type						Percent	Percent	Percent				
Rating Unit						5-31-06	6-27-06	7-11-06				
Rating Date						1 DA-C	28 DA-C	42 DA-C				
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
1	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	0	0	0
1	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
2	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	95	0	0
2	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
2	SEQUENCE	5.25	EW	1.64	lb ai/a	2.5	pt/a	PRE	B			
3	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	96	0	0
3	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
3	SEQUENCE	5.25	EW	1.97	lb ai/a	3	pt/a	PRE	B			
4	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	93	94	91
4	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
4	SEQUENCE	5.25	EW	1.64	lb ai/a	2.5	pt/a	PRE	B			
4	TOUCHDOWN TOTAL	4.17	SC	0.78	lb ae/a	24	fl oz/a	V2	C			
5	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	95	92	90
5	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
5	SEQUENCE	5.25	EW	1.97	lb ai/a	3	pt/a	PRE	B			
5	TOUCHDOWN TOTAL	4.17	SC	0.78	lb ae/a	24	fl oz/a	V2	C			
6	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	98	89	92
6	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
6	LEXAR	3.7	L	2.78	lb ai/a	3.0	qt/a	PRE	B			
7	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	97	89	87
7	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
7	LEXAR	3.7	L	2.08	lb ai/a	2.25	qt/a	PRE	B			
7	TOUCHDOWN TOTAL	4.17	SC	0.78	lb ae/a	24	fl oz/a	V2	C			
8	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	0	93	90
8	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
8	SEQUENCE	5.25	EW	1.64	lb ai/a	2.5	pt/a	V2	C			
9	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	0	94	94
9	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
9	SEQUENCE	5.25	EW	1.97	lb ai/a	3.0	pt/a	V2	C			
10	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	0	97	95
10	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
10	LEXAR	3.7	L	2.08	lb ai/a	2.25	qt/a	V2	C			
10	TOUCHDOWN TOTAL	4.17	SC	0.78	lb ae/a	24	fl oz/a	V2	C			
11	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	0	98	98
11	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
11	EXPERT	4.88	SC	4.27	lb ai/a	3.5	qt/a	V2	C			
12	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	94	96	93
12	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
12	LEXAR	3.7	L	1.39	lb ai/a	1.5	qt/a	PRE	B			
12	LEXAR	3.7	L	1.39	lb ai/a	1.5	qt/a	V2	C			
13	GRAMOXONE INTEON	2	SL	0.75	lb ai/a	3	pt/a	EPP3-10	A	0	90	89
13	PRIME OIL COC	100	LIQ	1	% v/v	1	% v/v	EPP3-10	A			
13	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	C			
LSD (P=.05)										3.6	7.7	7.8
Replicate F										0.647	0.708	0.322
Replicate Prob(F)										0.5900	0.5536	0.8096
Treatment F										1551.379	232.971	218.459
Treatment Prob(F)										0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Syngenta.
2. Ratings: CI 4-7 DAE and at V2 application; WC at V2 and 28 and 42 days after V2 application.
3. Yield.
4. Blanket early preplant burndown application at 3-10 days before planned planting date, see trt list.
Blanket application is 10 ft wide to all plots, all XXX plots, and 10 ft of the left border nearest 101.
5. IPOSS was IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
6. DA-A = Days after EPP3-10 application. DA-C = Days after V2 application.
Ratings at 1 DA-C were at the V2 application.
7. Not possible to rate crop injury in all plots on 5-17-06 and 5-31-06 due to flooding and re-planting.
8. Harvested 10-12-06, (2) 30 inch rows by 25 ft.