

Degree Applied Mid-POST to Corn.

Trial ID: 08-1-W60 Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-15-08

Objectives: Evaluate the performance of Degree on weed control, crop safety and yield when applied as a sequential treatment when corn is 20 (V6) and 30 (V8) inches tall. The sequential treatment will follow a Roundup Ready rate of the premix product applied PRE and followed by tankmixing with the Roundup application.

Crop 1: ZEAMD Dent corn Variety: P33K44
 Planting Method: SEEDED Planting Date: 06-15-08
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall
 Pest 2 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 4 Type: W Code: CHEAL Chenopodium album L. lambsquarters, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 28 FT Tillage Type: REDUCED-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2007

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 100 LB/A

% OM: 1.6 Texture: SILT LOAM
 pH: 6.2 Soil Name: WINFIELD
 CEC: 8 Fert. Level: P1: 83 LB/A, K: 396 LB/A

Application Description

	A	B	C
Application Date:	06-15-08	07-11-08	07-18-08
Time of Day:	16:30	9:00	9:45
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V6	V8
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	NRJ	TGM	TGM
Air Temperature, Unit:	88 F	78 F	88 F
% Relative Humidity:	60	92	58
Wind Velocity, Unit:	1 MPH	3 MPH	1 MPH
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	80 F	86 F	89 F
Soil Moisture:	ABONOR	ABONOR	NORMAL
% Cloud Cover:	60	60	0

	06-15-08	07-11-08	07-18-08
Crop stage at application:	NA	V6	V8
Height Min, Max (inch):		24 32	40 62

Pest Stage At Each Application

	06-15-08	07-11-08	07-18-08
Application Date:	06-15-08	07-11-08	07-18-08
Weed Code:	PANDI	PANDI	PANDI
Stage Majority (leaves):	NA	12	30
Stage Min, Max:		4 16	6 42
Height Majority:		14 IN	18 IN
Height Min, Max:		6 16	10 20
Density, Unit:		4 FT2	0.5 FT2
Weed Code:	ABUTH	ABUTH	ABUTH
Stage Majority (leaves):	NA	5	6
Stage Min, Max:		4 7	2 7
Height Majority:		6 IN	5 IN
Height Min, Max:		3 8	2 20
Density, Unit:		1 FT2	1 FT2
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	6	NA
Stage Min, Max:		2 10	
Height Majority:		5 IN	
Height Min, Max:		1 7	
Density, Unit:		2 FT2	
Weed Code:	CHEAL	CHEAL	CHEAL
Stage Majority (leaves):	NA	6	NA
Stage Min, Max:		2 10	
Height Majority:		4 IN	
Height Min, Max:		1 7	
Density, Unit:		2 FT2	

Application Equipment

	CO2 sprayer	CO2 sprayer	CO2 sprayer
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

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Pest Code													PANDI	PANDI	PANDI		
Crop Code													ZEAMD	ZEAMD	ZEAMD		
Rating Date													11-10-08	11-10-08	07-04-08		
Rating Data Type													Moisture	Yield	Injury		
Rating Unit													Percent	bu/A	Percent		
Rating Timing													0 DA-C	7 DA-B	7 DA-C		
Trt-Eval Interval													19 DA-A	-1 DA-C	20 DACT		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
1	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	19.5 ab	214 ab	0 a	0 b	0 a	96 abc	96 abc	97 ab
1	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B								
1	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B								
2	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	18.9 abc	214 ab	0 a	2 a	0 a	94 c	93 abc	99 a
2	DEGREE	3.8	ME	1.43 lb ai/a	1.5 qt/a			V6	B								
2	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B								
2	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B								
3	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	18.8 abc	230 a	0 a	1 ab	0 a	94 c	98 ab	98 ab
3	DEGREE	3.8	ME	2.86 lb ai/a	3 qt/a			V6	B								
3	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B								
3	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B								
4	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	19.3 abc	219 ab	0 a		0 a	97 abc	81 de	99 a
4	DEGREE	3.8	ME	1.43 lb ai/a	1.5 qt/a			V8	C								
4	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V8	C								
4	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V8	C								
5	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	19.6 a	204 bc	0 a		0 a	98 ab	90 a-d	99 a
5	DEGREE	3.8	ME	2.86 lb ai/a	3 qt/a			V8	C								
5	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V8	C								
5	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V8	C								
6	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	19.0 abc	216 ab	0 a	0 b	0 a	98 a	99 a	99 a
6	CALLISTO	4	SC	0.094 lb ai/a	3 fl oz/a			V6	B								
6	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B								
6	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B								
7	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	19.2 abc	225 ab	0 a	1 ab	0 a	95 abc	99 a	99 a
7	STATUS	56	WG	0.0875 lb ai/a	2.5 oz/a			V6	B								
7	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B								
7	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B								
8	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	18.9 abc	215 ab	0 a	1 ab	0 a	99 a	98 ab	99 a
8	IMPACT	2.8	SC	0.011 lb ai/a	0.5 fl oz/a			V6	B								
8	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B								
8	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B								
9	DEGREE XTRA	4.04	CS	3 lb ai/a	3.0 qt/a			PRE	A	19.4 abc	221 ab	0 a	0 b	0 a	97 ab	91 abc	96 ab
10	LUMAX	3.95	SE	2.46 lb ai/a	2.5 qt/a			PRE	A	18.3 c	226 ab	0 a	0 b	0 a	95 bc	87 cd	88 c
11	NONTREATED									18.3 bc	183 c	0 a	0 b	0 a	0 d	0 f	0 e
12	LEXAR	3.7	SC	2.78 lb ai/a	3.0 qt/a			PRE	A	19.9 a	209 ab	0 a	0 b	0 a	98 ab	89 bcd	93 b
13	LEXAR	3.7	SC	2.78 lb ai/a	3.0 qt/a			PRE	A	19.1 abc	211 ab	0 a	0 b	0 a	93 c	73 e	78 d
13	AATREX NINE-O	90	WG	0.5 lb ai/a	0.56 lb/a			PRE	A								
LSD (P=.05)										1.26	25.7	0.0	1.4	0.0	3.7	9.8	4.3
Replicate F										4.193	0.007	0.000	4.136	0.000	0.877	0.237	1.079
Replicate Prob(F)										0.0274	0.9930	1.0000	0.0144	1.0000	0.4623	0.8698	0.3704
Treatment F										1.225	1.833	0.000	1.355	0.000	428.770	58.918	326.780
Treatment Prob(F)										0.3224	0.0997	1.0000	0.2479	1.0000	0.0001	0.0001	0.0001

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

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								ABUTH	ABUTH	ABUTH	AMATA	AMATA	AMATA
								07-04-08	07-17-08	08-24-08	07-04-08	07-17-08	08-24-08
								Control	Control	Control	Control	Control	Control
								Percent	Percent	Percent	Percent	Percent	Percent
								6 DA-B	6 DA-B	20 DACT	6 DA-B	6 DA-B	20 DACT
								19 DA-A	-1 DA-C		19 DA-A	-1 DA-C	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	95 a-d	98 a	98 ab	99 a	99 a
1	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V6	B					
1	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V6	B					
2	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	86 cd	94 ab	98 ab	99 a	99 a
2	DEGREE	3.8	ME	1.43 lb ai/a	1.5	qt/a	V6	B					
2	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V6	B					
2	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V6	B					
3	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	88 cd	93 ab	99 a	99 a	99 a
3	DEGREE	3.8	ME	2.86 lb ai/a	3	qt/a	V6	B					
3	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V6	B					
3	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V6	B					
4	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	89 bcd	71 c	97 bc	99 a	99 a
4	DEGREE	3.8	ME	1.43 lb ai/a	1.5	qt/a	V8	C					
4	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V8	C					
4	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V8	C					
5	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	91 a-d	86 b	96 c	99 a	99 a
5	DEGREE	3.8	ME	2.86 lb ai/a	3	qt/a	V8	C					
5	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V8	C					
5	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V8	C					
6	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	89 bcd	95 ab	99 a	99 a	99 a
6	CALLISTO	4	SC	0.094 lb ai/a	3	fl oz/a	V6	B					
6	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V6	B					
6	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V6	B					
7	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	86 d	89 ab	99 a	99 a	99 a
7	STATUS	56	WG	0.0875 lb ai/a	2.5	oz/a	V6	B					
7	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V6	B					
7	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V6	B					
8	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0	qt/a	PRE	A	95 abc	94 ab	99 a	99 a	99 a
8	IMPACT	2.8	SC	0.011 lb ai/a	0.5	fl oz/a	V6	B					
8	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22	fl oz/a	V6	B					
8	N-PAK AMS	100	SL	5.0 % v/v	5	% v/v	V6	B					
9	DEGREE XTRA	4.04	CS	3 lb ai/a	3.0	qt/a	PRE	A	98 ab	91 ab	99 a	99 a	99 a
10	LUMAX	3.95	SE	2.46 lb ai/a	2.5	qt/a	PRE	A	98 ab	98 ab	99 a	99 a	99 a
11	NONTREATED								0 e	0 d	0 d	0 b	0 b
12	LEXAR	3.7	SC	2.78 lb ai/a	3.0	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
13	LEXAR	3.7	SC	2.78 lb ai/a	3.0	qt/a	PRE	A	99 a	99 a	99 a	99 a	99 a
13	AATREX NINE-O	90	WG	0.5 lb ai/a	0.56	lb/a	PRE	A					
LSD (P=.05)									9.3	11.6	1.6	0.0	0.0
Replicate F									1.222	0.840	3.135	0.000	0.000
Replicate Prob(F)									0.3157	0.4810	0.0372	1.0000	1.0000
Treatment F									64.595	42.876	2514.087	0.000	0.000
Treatment Prob(F)									0.0001	0.0001	0.0001	1.0000	1.0000

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

Degree Applied Mid-POST to Corn.

Trial ID: 08-1-W60

Location: Belleville Res. Center

Pest Code	CHEAL	CHEAL	CHEAL
Crop Code			
Rating Date	07-04-08	07-17-08	08-24-08
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Timing		6 DA-B	20 DACT
Trt-Eval Interval	19 DA-A	-1 DA-C	

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
1	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B			
1	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B			
2	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 b	99 a	99 a
2	DEGREE	3.8	ME	1.43 lb ai/a	1.5 qt/a			V6	B			
2	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B			
2	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B			
3	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
3	DEGREE	3.8	ME	2.86 lb ai/a	3 qt/a			V6	B			
3	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B			
3	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B			
4	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
4	DEGREE	3.8	ME	1.43 lb ai/a	1.5 qt/a			V8	C			
4	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V8	C			
4	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V8	C			
5	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
5	DEGREE	3.8	ME	2.86 lb ai/a	3 qt/a			V8	C			
5	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V8	C			
5	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V8	C			
6	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
6	CALLISTO	4	SC	0.094 lb ai/a	3 fl oz/a			V6	B			
6	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B			
6	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B			
7	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
7	STATUS	56	WG	0.0875 lb ai/a	2.5 oz/a			V6	B			
7	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B			
7	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B			
8	DEGREE XTRA	4.04	CS	2 lb ai/a	2.0 qt/a			PRE	A	99 a	99 a	99 a
8	IMPACT	2.8	SC	0.011 lb ai/a	0.5 fl oz/a			V6	B			
8	ROUNDUP P-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a			V6	B			
8	N-PAK AMS	100	SL	5.0 % v/v	5 % v/v			V6	B			
9	DEGREE XTRA	4.04	CS	3 lb ai/a	3.0 qt/a			PRE	A	99 a	99 a	99 a
10	LUMAX	3.95	SE	2.46 lb ai/a	2.5 qt/a			PRE	A	99 a	99 a	99 a
11	NONTREATED									0 c	0 b	0 b
12	LEXAR	3.7	SC	2.78 lb ai/a	3.0 qt/a			PRE	A	99 a	99 a	99 a
13	LEXAR	3.7	SC	2.78 lb ai/a	3.0 qt/a			PRE	A	99 a	99 a	99 a
13	AATREX NINE-O	90	WG	0.5 lb ai/a	0.56 lb/a			PRE	A			
LSD (P=.05)										0.2	0.0	0.0
Replicate F										1.000	0.000	0.000
Replicate Prob(F)										0.4040	1.0000	1.0000
Treatment F										156751.016	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000

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

Trial Comments

1. Protocol: Monsanto (04-04).
2. Ratings: CI 7-10 DA each POST; WC, all plots, prior to "B", prior to "C" and 20 days after tassel.
3. Yield + moisture (Dispose of grain for trts 2-5).
4. Please note the date when PRE applied weed control failed (June 30, 2008).
5. DA-A = Days after the PRE application. DA-B = Days after V6 application. DA-C = Days after V8 application.
DACT = Days after corn tassel.
6. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
Following the PRE application on June 15, rainfall was 0.29 inch 5 days later and 0.35 inch 12 days later.
7. Harvested 11-10-08, (2) 30 inch rows by 25 ft.