

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
 Location: Belleville Res. Center

Investigator: Bryan Young

General Trial Information	
Study Director: Bryan Young	Investigator: Bryan Young Title: Professor
Trial Status: F - one-year/final	Initiation Date: 5-16-12
Trial Location	
City: Belleville	State/Prov.: IL
Postal Code: 62221	Country: USA

Objectives:
 Evaluate the performance of Prequel weed control programs in corn compared with competitive programs.

Personnel	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415	Location: Carbondale IL
Postal Code: 62901	E-mail: bgyoung@siu.edu
Phone No.: 618-453-7679	Mobile No.: 618-713-6471

Crop Description	
Crop 1: ZEAMD Zea mays indentata Dent corn	Description: RR2/LL
Variety: DKC 61-06	Planting Date: 5-16-12
BBCH Scale: BCOR	Planting Method: SEEDED Seeded
Planting Method: SEEDED Seeded	Rate, Unit: 28000 S/A
Depth, Unit: 1.5 IN	Row Spacing, Unit: 30 IN

Pest Description	
Pest 1 Type: W Code: GGGAN	Common Name: grasses, annual
	Description: Mixture of SETFA and PANDI
Pest 2 Type: W Code: AMBTR - Ambrosia trifida L.	Common Name: ragweed, giant
Pest 3 Type: W Code: AMATA - Amaranthus rudis Sauer	Common Name: waterhemp, common
Pest 4 Type: W Code: ABUTH - Abutilon theophrasti Medik.	Common Name: velvetleaf

Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 28 FT	Tillage Type: REDTIL reduced-till
Plot Area, Unit: 280 FT2	Study Design: RACOB L Randomized Complete Block (RCB)
Replications: 3	

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Description	
% OM: 1.6	Texture: SIL SILT LOAM
pH: 5.9	Soil Name: PIERRON
CEC: 6	

Additional Measured Elements		
Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

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Moisture and Weather Conditions	
Overall Moisture Conditions:	BELNOR below normal
Closest Weather Station: ICN - Belleville IL	Distance, Unit: 0.5 MI

Application Description		
	A	B
Application Date:	5-17-12	6-13-12
Time of Day:	15:00	10:15
Application Method:	Spray	Spray
Application Timing:	PRE	28DAP
Application Placement:	BROFOL	BROFOL
Applied By:	RJW	JRK
Air Temperature, Unit:	79 F	73 F
% Relative Humidity:	29	41
Wind Velocity, Unit:	6 MPH	3 MPH
Wind Direction:	E	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	72 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	30	15
Next Rain Occurred On:	5-21-12	6-16-12

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V6
Stage Minimum, Percent:		V5
Stage Maximum, Percent:		V6
Height, Unit:		22 IN
Height Minimum, Maximum:		17 22

Pest Stage At Each Application			
	A	B	
Pest 1 Code, Type, Scale:	GGGAN W DESC	GGGAN	W DESC
Stage Majority, Percent:	NA	4	
Stage Minimum, Percent:		1	
Stage Maximum, Percent:		8	
Height, Unit:		3	IN
Height Minimum, Maximum:		0.5	6
Density, Unit:		1	FT2
Pest 2 Code, Type, Scale:	AMBTR W DESC	AMBTR	W DESC
Stage Majority, Percent:	NA	6	
Stage Minimum, Percent:		2	
Stage Maximum, Percent:		14	
Height, Unit:		5	IN
Height Minimum, Maximum:		1	10
Density, Unit:		0.5	FT2
Pest 3 Code, Type, Scale:	AMATA W DESC	AMATA	W DESC
Stage Majority, Percent:	NA	4	
Stage Minimum, Percent:		2	
Stage Maximum, Percent:		8	
Height, Unit:		2	IN
Height Minimum, Maximum:		1	5
Density, Unit:		0.01	FT2
Pest 4 Code, Type, Scale:	ABUTH W DESC	ABUTH	W DESC
Stage Majority, Percent:	NA	4	
Stage Minimum, Percent:		2	
Stage Maximum, Percent:		6	
Height, Unit:		3	IN
Height Minimum, Maximum:		1	5
Density, Unit:		0.01	FT2

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Application Equipment		
	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							ZEAMD 5-30-12 Injury Percent 14 DAP 13 DA-A	ZEAMD 6-13-12 Injury Percent 28 DAP 27 DA-A	ZEAMD 7-11-12 Injury Percent 28 DA-B	GGGAN 5-30-12 Control Percent 14 DAP 13 DA-A	GGGAN 6-13-12 Control Percent 28 DAP 27 DA-A	GGGAN 7-11-12 Control Percent 28 DA-B				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate	Unit	Growth Stage	Appl Code						
1	PREQUEL BREAKFREE ATZ	45 WG 5.25 SC		0.056 lb ai/a 1.97 lb ai/a		2 oz/a 1.5 qt/a			PRE PRE	A A	0 a	0 a	0 a	88 ab	82 ab	78 bc
2	PREQUEL BREAKFREE ATZ	45 WG 5.25 SC		0.0467 lb ai/a 2.63 lb ai/a		1.66 oz/a 2 qt/a			PRE PRE	A A	0 a	0 a	0 a	95 a	90 a	86 ab
3	PREQUEL CINCH ATZ	45 WG 5.5 SC		0.0467 lb ai/a 2.75 lb ai/a		1.66 oz/a 2 qt/a			PRE PRE	A A	0 a	0 a	0 a	93 ab	77 abc	75 bc
4	PREQUEL AATREX REALM Q ABUNDIT EXTRA N-PAK AMS	45 WG 4 SC 38.75 WG 3 SL 3.4 SL		0.0467 lb ai/a 1 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 5.9 % v/v		1.66 oz/a 1 qt/a 4 oz/a 32 fl oz/a 3 lb ai/a			PRE PRE 28DAP 28DAP 28DAP	A A B B B	0 a	0 a	0 a	87 ab	55 d	98 a
5	CORVUS	2.62 SC		0.115 lb ai/a		5.6 fl oz/a			PRE	A	0 a	0 a	0 a	87 ab	63 cd	65 c
6	CORVUS AATREX	2.62 SC 4 SC		0.115 lb ai/a 1 lb ai/a		5.6 fl oz/a 1 qt/a			PRE PRE	A A	0 a	0 a	0 a	83 b	75 bc	75 bc
7	NONTREATED										0 a	0 a	0 a	0 c	0 e	0 d
8	PREQUEL AATREX	45 WG 4 SC		0.07 lb ai/a 2 lb ai/a		2.5 oz/a 2 qt/a			PRE PRE	A A	0 a	0 a	0 a	88 ab	85 ab	82 abc
LSD (P=.05)							0.0	0.0	0.0	10.6	14.7	18.0				
Standard Deviation							0.0	0.0	0.0	6.0	8.3	10.2				
CV							0.0	0.0	0.0	7.77	12.64	14.58				
Replicate F							0.000	0.000	0.000	2.600	0.101	2.363				
Replicate Prob(F)							1.0000	1.0000	1.0000	0.1096	0.9042	0.1332				
Treatment F							0.000	0.000	0.000	82.282	36.339	25.667				
Treatment Prob(F)							1.0000	1.0000	1.0000	0.0001	0.0001	0.0001				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Code	AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA									
Crop Code	5-30-12	6-13-12	7-11-12	5-30-12	6-13-12	7-11-12									
Rating Date	Control	Control	Control	Control	Control	Control									
Rating Type	Percent	Percent	Percent	Percent	Percent	Percent									
Rating Unit	14 DAP	28 DAP	14 DAP	14 DAP	28 DAP	28 DAP									
Rating Timing	13 DA-A	27 DA-A	28 DA-B	13 DA-A	27 DA-A	28 DA-B									
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Unit	Growth Stage	Appl Code						
1	PREQUEL BREAKFREE ATZ	45 WG 5.25 SC		0.056 lb ai/a 1.97 lb ai/a	ai/a	2 oz/a 1.5 qt/a		PRE PRE	A A	88 a	82 a	80 ab	99 a	99 a	96 ab
2	PREQUEL BREAKFREE ATZ	45 WG 5.25 SC		0.0467 lb ai/a 2.63 lb ai/a	ai/a	1.66 oz/a 2 qt/a		PRE PRE	A A	86 a	66 ab	63 b	99 a	98 a	99 a
3	PREQUEL CINCH ATZ	45 WG 5.5 SC		0.0467 lb ai/a 2.75 lb ai/a	ai/a	1.66 oz/a 2 qt/a		PRE PRE	A A	87 a	60 ab	67 b	99 a	96 a	93 ab
4	PREQUEL AATREX REALM Q ABUNDIT EXTRA N-PAK AMS	45 WG 4 SC 38.75 WG 3 SL 3.4 SL		0.0467 lb ai/a 1 lb ai/a 0.097 lb ai/a 0.75 lb ae/a 5.9 % v/v	ai/a	1.66 oz/a 1 qt/a 4 oz/a 32 fl oz/a 3 lb ai/a		PRE PRE 28DAP 28DAP 28DAP	A A B B B	80 a	60 ab	99 a	99 a	80 b	98 ab
5	CORVUS	2.62 SC		0.115 lb ai/a	ai/a	5.6 fl oz/a		PRE	A	87 a	53 b	63 b	99 a	90 ab	85 b
6	CORVUS AATREX	2.62 SC 4 SC		0.115 lb ai/a 1 lb ai/a	ai/a	5.6 fl oz/a 1 qt/a		PRE PRE	A A	83 a	57 b	57 b	99 a	90 ab	90 ab
7	NONTREATED									0 b	0 c	0 c	0 b	0 c	0 c
8	PREQUEL AATREX	45 WG 4 SC		0.07 lb ai/a 2 lb ai/a	ai/a	2.5 oz/a 2 qt/a		PRE PRE	A A	90 a	77 ab	66 b	98 a	93 a	91 ab
LSD (P=.05)	11.6	23.5	28.5	1.4	10.1	13.9									
Standard Deviation	6.6	13.3	16.2	0.8	5.7	7.9									
CV	8.77	23.45	26.13	0.94	7.09	9.68									
Replicate F	8.661	10.997	9.841	1.000	0.946	1.519									
Replicate Prob(F)	0.0036	0.0016	0.0025	0.3927	0.4134	0.2553									
Treatment F	64.317	10.523	9.194	5492.849	100.855	53.385									
Treatment Prob(F)	0.0001	0.0002	0.0004	0.0001	0.0001	0.0001									

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Pest Code	ABUTH	ABUTH	ABUTH									
Crop Code	5-30-12	6-13-12	7-11-12									
Rating Date	Control	Control	Control									
Rating Type	Percent	Percent	Percent									
Rating Unit	14 DAP	28 DAP										
Rating Timing	13 DA-A	27 DA-A	28 DA-B									
Trt-Eval Interval												
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	PREQUEL BREAKFREE ATZ	45 5.25	WG SC	0.056 1.97	lb ai/a lb ai/a	2 1.5	oz/a qt/a	PRE PRE	A A	90 ab	60 ab	60 bc
2	PREQUEL BREAKFREE ATZ	45 5.25	WG SC	0.0467 2.63	lb ai/a lb ai/a	1.66 2	oz/a qt/a	PRE PRE	A A	95 a	72 a	65 bc
3	PREQUEL CINCH ATZ	45 5.5	WG SC	0.0467 2.75	lb ai/a lb ai/a	1.66 2	oz/a qt/a	PRE PRE	A A	84 d	55 ab	63 bc
4	PREQUEL AATREX REALM Q ABUNDIT EXTRA N-PAK AMS	45 4 38.75 3 3.4	WG SC WG SL SL	0.0467 1 0.097 0.75 5.9	lb ai/a lb ai/a lb ai/a lb ae/a % v/v	1.66 1 4 32 3	oz/a qt/a oz/a fl oz/a lb ai/a	PRE PRE 28DAP 28DAP 28DAP	A A B B B	85 cd	40 b	99 a
5	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	85 cd	50 ab	48 c
6	CORVUS AATREX	2.62 4	SC SC	0.115 1	lb ai/a lb ai/a	5.6 1	fl oz/a qt/a	PRE PRE	A A	87 bcd	58 ab	70 bc
7	NONTREATED									0 e	0 c	0 d
8	PREQUEL AATREX	45 4	WG SC	0.07 2	lb ai/a lb ai/a	2.5 2	oz/a qt/a	PRE PRE	A A	90 abc	75 a	79 ab
LSD (P=.05)										5.2	29.4	26.7
Standard Deviation										3.0	16.7	15.2
CV										3.86	32.53	25.03
Replicate F										12.432	4.952	5.778
Replicate Prob(F)										0.0008	0.0252	0.0160
Treatment F										332.723	5.980	10.743
Treatment Prob(F)										0.0001	0.0028	0.0002

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Trial Comments

1. Protocol: DuPont (USA-12-011).
2. Ratings: CI/WC at 14 and 28 DAP and at 28 DA-B.
3. Rainfall following the PRE application was 0.18 inch 4 days later, 0.28 inch 14 days later and 0.75 inch 25 days later.
4. DAP = Days after planting.
5. Not harvested.