

No-Till Corn Weed Control Studies

Southern Illinois University

Corvus Burndown and Residual in No-Till Corn.

Trial ID: 11-11A-E40

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:** 5-5-11

Objectives: Compare the burndown and residual weed control provided by Corvus with competitive products.

Crop 1: ZEAMD Dent corn **Variety:** DKC 61-21 GENSS **Description:** RR2/LL
Planting Method: SEEDED **Planting Date:** 6-5-11
Rate, Unit: 28000 S/A **Depth, Unit:** 1.5 IN
Row Spacing, Unit: 30 IN

Pest 1 Type: W	Code: HORPU	Hordeum pusillum Nutt.	barley, little
Pest 2 Type: W	Code: VERPG	Veronica peregrina L.	speedwell, purslane
Pest 3 Type: W	Code: AMBTR	Ambrosia trifida L.	ragweed, giant
Pest 4 Type: W	Code: POLPY	Polygonum pensylvanicum L.	smartweed, Pennsylvania
Pest 5 Type: W	Code: SETFA	Setaria faberi Herrm.	foxtail, giant
Pest 6 Type: W	Code: AMATA	Amaranthus rudis Sauer	waterhemp, common

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 25 FT **Tillage Type:** NO-TILL
Replications: 3 **Study Design:** Randomized Complete Block

Prior Crops, Year
1. GLXMA 2010

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

% OM: 1.7	Texture: SILT LOAM
pH: 7	Soil Name: PIERRON
CEC: 9	Fert. Level: P1: 84 LB/A, K: 270 LB/A

Application Description

Application Date: 5-5-11
Time of Day: 8:00
Application Method: Spray
Application Timing: 0-7DBP
Application Placement: BROFOL
Applied By: RFK
Air Temperature, Unit: 52 F
% Relative Humidity: 74
Wind Velocity, Unit: 3 MPH
Wind Direction: S
Dew Presence (Y/N): N
Soil Temperature, Unit: 57 F
Soil Moisture: ABONOR
% Cloud Cover: 0

Crop stage at application: 5-5-11
NA

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Pest Stage At Each Application

Application Date: 5-5-11
Weed Code: HORPU
Stage Majority (leaves): 6
Stage Min, Max: 5 6
Height Majority: 8 IN
Height Min, Max: 6 10
Density, Unit: 0.1 FT2
Weed Code: VERPG
Stage Majority (leaves): 10+
Stage Min, Max: 10 10+
Height Majority: 4 IN
Height Min, Max: 2 5
Density, Unit: 0.1 FT2
Weed Code: AMBTR
Stage Majority (leaves): 4
Stage Min, Max: 2 6
Height Majority: 3 IN
Height Min, Max: 2 4
Density, Unit: 1 FT2
Weed Code: POLPY
Stage Majority (leaves): 4
Stage Min, Max: 2 6
Height Majority: 2 IN
Height Min, Max: 1 3
Density, Unit: 0.1 FT2
Weed Code: SETFA
Stage Majority (leaves): 2
Stage Min, Max: 1 3
Height Majority: 1 IN
Height Min, Max: 0 2
Density, Unit: 0.01 FT2
Weed Code: AMATA
Stage Majority (leaves): NA

Application Equipment

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

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Pest Code										HORPU			VERPG			AMBTR		
Crop Code										ZEAMD								
Rating Date										6-30-11			5-19-11			6-2-11		
Rating Data Type										Injury			Control			Control		
Rating Unit										Percent			Percent			Percent		
Rating Timing										56 DA-A			14 DA-A			28 DA-A		
Trt-Eval Interval										14 DA-A			28 DA-A			56 DA-A		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code									
1	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	0 a	66 b	99 a	99 a	99 a	99 a	99 a	99 a	86 a
1	AATREX	4	SC		1 lb ai/a	1	qt/a	0-7DBP	A									
1	COC (PRIME OIL)	100	SL		1 % v/v	1	% v/v	0-7DBP	A									
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	0 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	85 a
2	AATREX	4	SC		1 lb ai/a	1	qt/a	0-7DBP	A									
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	0-7DBP	A									
2	AMS	100	SG		1 % w/w	8.5	lb/100 gal	0-7DBP	A									
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	0 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	83 ab
3	AATREX	4	SC		1 lb ai/a	1	qt/a	0-7DBP	A									
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	0-7DBP	A									
3	AMS	100	SG		1 % w/w	8.5	lb/100 gal	0-7DBP	A									
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	0 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	88 a
4	AATREX	4	SC		1 lb ai/a	1	qt/a	0-7DBP	A									
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	0-7DBP	A									
4	MSO (MSO CONC)	100	SL		1 % v/v	1	% v/v	0-7DBP	A									
5	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	0-7DBP	A	0 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	53 c
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	0-7DBP	A									
5	AMS	100	SG		1 % w/w	8.5	lb/100 gal	0-7DBP	A									
6	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	0-7DBP	A	0 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	67 bc
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	0-7DBP	A									
6	AMS	100	SG		1 % w/w	8.5	lb/100 gal	0-7DBP	A									
7	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	0-7DBP	A	0 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	82 ab
7	AATREX	4	SC		1 lb ai/a	1	qt/a	0-7DBP	A									
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	0-7DBP	A									
7	MSO (MSO CONC)	100	SL		1 % v/v	1	% v/v	0-7DBP	A									
7	AMS	100	SG		1 % w/w	8.5	lb/100 gal	0-7DBP	A									
8	NONTREATED									0 a	0 c	0 b	0 b	0 b	0 b	0 b	0 b	0 d
LSD (P=.05)										0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	16.0
Replicate F										0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	4.115
Replicate Prob(F)										1.0000	0.3927	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0393
Treatment F										0.000	37.275	0.000	0.000	0.000	0.000	0.000	0.000	32.125
Treatment Prob(F)										1.0000	0.0001	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001

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

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Pest Code	POLPY	POLPY	POLPY	SETFA	SETFA	AMATA
Crop Code						
Rating Date	5-19-11	6-2-11	6-30-11	6-2-11	6-30-11	6-30-11
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing						
Trt-Eval Interval	14 DA-A	28 DA-A	56 DA-A	28 DA-A	56 DA-A	56 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	99 a	99 a	99 a	99 a	96 a	55 ab
1	AATREX	4	SC	1	lb ai/a	1	qt/a	0-7DBP	A						
1	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	0-7DBP	A						
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	99 a	99 a	99 a	99 a	97 a	53 ab
2	AATREX	4	SC	1	lb ai/a	1	qt/a	0-7DBP	A						
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	0-7DBP	A						
2	AMS	100	SG	1	% w/w	8.5	lb/100 gal	0-7DBP	A						
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	99 a	99 a	99 a	99 a	96 a	47 ab
3	AATREX	4	SC	1	lb ai/a	1	qt/a	0-7DBP	A						
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	0-7DBP	A						
3	AMS	100	SG	1	% w/w	8.5	lb/100 gal	0-7DBP	A						
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	0-7DBP	A	99 a	99 a	99 a	99 a	95 a	47 ab
4	AATREX	4	SC	1	lb ai/a	1	qt/a	0-7DBP	A						
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	0-7DBP	A						
4	MSO (MSO CONC)	100	SL	1	% v/v	1	% v/v	0-7DBP	A						
5	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	0-7DBP	A	99 a	99 a	99 a	99 a	58 b	40 b
5	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	0-7DBP	A						
5	AMS	100	SG	1	% w/w	8.5	lb/100 gal	0-7DBP	A						
6	DEGREE XTRA	4.04	CS	3.03	lb ai/a	3	qt/a	0-7DBP	A	99 a	99 a	99 a	99 a	60 b	77 a
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	0-7DBP	A						
6	AMS	100	SG	1	% w/w	8.5	lb/100 gal	0-7DBP	A						
7	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	0-7DBP	A	99 a	99 a	99 a	99 a	55 b	75 a
7	AATREX	4	SC	1	lb ai/a	1	qt/a	0-7DBP	A						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	0-7DBP	A						
7	MSO (MSO CONC)	100	SL	1	% v/v	1	% v/v	0-7DBP	A						
7	AMS	100	SG	1	% w/w	8.5	lb/100 gal	0-7DBP	A						
8	NONTREATED									0 b	0 b	0 b	0 b	0 c	0 c
LSD (P=.05)										0.0	0.0	0.0	0.0	6.5	31.0
Replicate F										0.000	0.000	0.000	0.000	2.925	3.502
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0868	0.0585
Treatment F										0.000	0.000	0.000	0.000	248.603	5.468
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0001	0.0034

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

Trial Comments

1. Protocol: Bayer (BLH).
2. Ratings: CI at 14, 28 and 56 DAT; WC at 14, 28 and 56 DAT.
3. Plant early.
4. Take photos to show any differences.
5. Planned planting date was 5-10-11, planting was delayed until 5-23-11, then replanted 6-5-11.
Due to delayed planting it was not possible to rate crop injury at 14 or 28 DAT.