

Soil Insecticide with Safened SU Herbicides.

Trial ID: 11-20A-E100 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: 5-31-11

Objectives: To evaluate crop tolerance after postemergence applications of Realm Q, Resolve Q, and Steadfast Q at 20, 30, and 40 days after planting to corn that had recieved an in-furrow Counter 20G treatment at planting.

Crop 1: ZEAMD Dent corn Variety: DKC 61-21 GENSS Description: RR2/LL
 Planting Method: SEEDED Planting Date: 5-31-11
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Code: NA

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 27 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2010

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

% OM: 2 Texture: SILT LOAM
 pH: 6.8 Soil Name: BETHALTO
 CEC: 10 Fert. Level: P1 64 LB/A, K 327 LB/A

Application Description

	A	B	C	D
Application Date:	5-31-11	6-20-11	6-30-11	7-11-11
Time of Day:		10:00	9:00	20:00
Application Method:	PLANTER	Spray	Spray	Spray
Application Timing:	ATPLANT	20DAP	30DAP	40DAP
Application Placement:	IN-FURROW	BROFOL	BROFOL	BROFOL
Applied By:	CME	LAH	JRK	
Air Temperature, Unit:	85 F	80 F	86 F	86 F
% Relative Humidity:	63	67	75	
Wind Velocity, Unit:	4 MPH	0 MPH	0 MPH	0 MPH
Wind Direction:	S			
Dew Presence (Y/N):	N	N	N	
Soil Temperature, Unit:	77 F	77 F	83 F	83 F
Soil Moisture:	ABONOR	ABONOR	ABONOR	
% Cloud Cover:	30	0	15	

	31-5-11	20-6-11	30-6-11	11-7-11
Crop stage at application:	V5	V7	V10	V11
Height Min, Max (inch):	10 10	12 25	28 60	74

Pest Stage At Each Application

Application Date:	5-31-11	6-20-11	6-30-11	7-11-11
Weed Code:	NA	NA	NA	NA

Application Equipment

Appl. Equipment:	PLANTER	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	5 FT	5 FT	5 FT	5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-7-11 Moisture Percent	ZEAMD 10-7-11 Test wt. lb/bu	ZEAMD 10-7-11 Yield bu/A	ZEAMD Injury Percent 7 DAT	ZEAMD Injury Percent 14 DAT	ZEAMD Injury Percent 28 DAT
1	COUNTER 20 G	20	GR	1.2	oz ai/1000 row-ft			ATPLANT	A	20.1 a	54.0 a	153 cde	38 b	32 ab	21 b
1	REALM Q					4	oz/a	20DAP	B						
1	RESOLVE SG	25	SG	0.0188	lb ai/a			20DAP	B						
1	DPX-4145	50	WG	0.0094	lb ai/a			20DAP	B						
1	MESOTRIONE	50	WG	0.078	lb ai/a			20DAP	B						
1	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20DAP	B						
1	AMS	100	SG	2	lb/a	2	lb/a	20DAP	B						
2	REALM Q					4	oz/a	20DAP	B	19.8 a	54.1 a	167 abc	20 d	11 ef	5 d
2	RESOLVE SG	25	SG	0.0188	lb ai/a			20DAP	B						
2	DPX-4145	50	WG	0.0094	lb ai/a			20DAP	B						
2	MESOTRIONE	50	WG	0.078	lb ai/a			20DAP	B						
2	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20DAP	B						
2	AMS	100	SG	2	lb/a	2	lb/a	20DAP	B						
3	COUNTER 20 G	20	GR	1.2	oz ai/1000 row-ft			ATPLANT	A	20.7 a	53.7 a	142 def	43 a	37 a	26 a
3	RESOLVE Q	22.4	WG			1.25	oz/a	20DAP	B						
3	RESOLVE SG	25	SG	0.01437	lb ai/a			20DAP	B						
3	HARMONY SG	50	SG	0.00313	lb ai/a			20DAP	B						
3	DPX-4145	50	WG	0.00719	lb ai/a			20DAP	B						
3	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20DAP	B						
3	AMS	100	SG	2	lb/a	2	lb/a	20DAP	B						
4	RESOLVE Q	22.4	WG			1.25	oz/a	20DAP	B	19.3 a	54.3 a	159 bcd	20 d	10 ef	5 d
4	RESOLVE SG	25	SG	0.01437	lb ai/a			20DAP	B						
4	HARMONY SG	50	SG	0.00313	lb ai/a			20DAP	B						
4	DPX-4145	50	WG	0.00719	lb ai/a			20DAP	B						
4	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20DAP	B						
4	AMS	100	SG	2	lb/a	2	lb/a	20DAP	B						
5	COUNTER 20 G	20	GR	1.2	oz ai/1000 row-ft			ATPLANT	A	23.1 a	52.9 a	143 def	38 bc	30 b	23 ab
5	STEADFAST Q	37.7	WG			1.5	oz/a	20DAP	B						
5	ACCENT	75	WG	0.02362	lb ai/a			20DAP	B						
5	RESOLVE SG	25	SG	0.01172	lb ai/a			20DAP	B						
5	DPX-4145	50	WG	0.0078	lb ai/a			20DAP	B						
5	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20DAP	B						
5	AMS	100	SG	2	lb/a	2	lb/a	20DAP	B						
6	STEADFAST Q	37.7	WG			1.5	oz/a	20DAP	B	23.3 a	53.2 a	158 bcd	18 de	7 fg	5 d
6	ACCENT	75	WG	0.02362	lb ai/a			20DAP	B						
6	RESOLVE SG	25	SG	0.01172	lb ai/a			20DAP	B						
6	DPX-4145	50	WG	0.0078	lb ai/a			20DAP	B						
6	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20DAP	B						
6	AMS	100	SG	2	lb/a	2	lb/a	20DAP	B						
7	COUNTER 20 G	20	GR	1.2	oz ai/1000 row-ft			ATPLANT	A	20.0 a	54.0 a	135 ef	33 c	24 c	13 c
7	REALM Q					4	oz/a	30DAP	C						
7	RESOLVE SG	25	SG	0.0188	lb ai/a			30DAP	C						
7	DPX-4145	50	WG	0.0094	lb ai/a			30DAP	C						
7	MESOTRIONE	50	WG	0.078	lb ai/a			30DAP	C						
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DAP	C						
7	AMS	100	SG	2	lb/a	2	lb/a	30DAP	C						
8	REALM Q					4	oz/a	30DAP	C	20.8 a	53.7 a	153 cde	21 d	15 de	5 d
8	RESOLVE SG	25	SG	0.0188	lb ai/a			30DAP	C						
8	DPX-4145	50	WG	0.0094	lb ai/a			30DAP	C						
8	MESOTRIONE	50	WG	0.078	lb ai/a			30DAP	C						
8	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DAP	C						
8	AMS	100	SG	2	lb/a	2	lb/a	30DAP	C						
9	COUNTER 20 G	20	GR	1.2	oz ai/1000 row-ft			ATPLANT	A	22.5 a	53.2 a	123 f	35 bc	30 b	20 b
9	RESOLVE Q	22.4	WG			1.25	oz/a	30DAP	C						
9	RESOLVE SG	25	SG	0.01437	lb ai/a			30DAP	C						
9	HARMONY SG	50	SG	0.00313	lb ai/a			30DAP	C						
9	DPX-4145	50	WG	0.00719	lb ai/a			30DAP	C						
9	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DAP	C						
9	AMS	100	SG	2	lb/a	2	lb/a	30DAP	C						

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Pest Code	Crop Code	Rating Date	Rating Data Type	Rating Unit	Rating Timing	Trt-Eval Interval	ZEAMD 10-7-11 Moisture Percent	ZEAMD 10-7-11 Test wt. lb/bu	ZEAMD 10-7-11 Yield bu/A	ZEAMD Injury Percent 7 DAT	ZEAMD Injury Percent 14 DAT	ZEAMD Injury Percent 28 DAT
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code								
10	RESOLVE Q	22.4	WG			1.25	oz/a	30DAP	C	23.8 a	53.2 a	166 abc	20 d	16 d	12 c		
10	RESOLVE SG	25	SG	0.01437	lb ai/a			30DAP	C								
10	HARMONY SG	50	SG	0.00313	lb ai/a			30DAP	C								
10	DPX-4145	50	WG	0.00719	lb ai/a			30DAP	C								
10	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	30DAP	C								
10	AMS	100	SG		2 lb/a		2 lb/a	30DAP	C								
11	COUNTER 20 G	20	GR		1.2 oz ai/1000 row-ft			ATPLANT	A	19.7 a	54.3 a	124 f	37 bc	31 b	19 b		
11	STEADFAST Q	37.7	WG			1.5	oz/a	30DAP	C								
11	ACCENT	75	WG	0.02362	lb ai/a			30DAP	C								
11	RESOLVE SG	25	SG	0.01172	lb ai/a			30DAP	C								
11	DPX-4145	50	WG	0.0078	lb ai/a			30DAP	C								
11	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	30DAP	C								
11	AMS	100	SG		2 lb/a		2 lb/a	30DAP	C								
12	STEADFAST Q	37.7	WG			1.5	oz/a	30DAP	C	20.7 a	53.8 a	167 abc	14 ef	11 ef	4 de		
12	ACCENT	75	WG	0.02362	lb ai/a			30DAP	C								
12	RESOLVE SG	25	SG	0.01172	lb ai/a			30DAP	C								
12	DPX-4145	50	WG	0.0078	lb ai/a			30DAP	C								
12	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	30DAP	C								
12	AMS	100	SG		2 lb/a		2 lb/a	30DAP	C								
13	COUNTER 20 G	20	GR		1.2 oz ai/1000 row-ft			ATPLANT	A	20.5 a	53.8 a	177 ab	10 fg	4 ghi	2 de		
13	REALM Q					4	oz/a	40DAP	D								
13	RESOLVE SG	25	SG	0.0188	lb ai/a			40DAP	D								
13	DPX-4145	50	WG	0.0094	lb ai/a			40DAP	D								
13	MESOTRIONE	50	WG	0.078	lb ai/a			40DAP	D								
13	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	40DAP	D								
13	AMS	100	SG		2 lb/a		2 lb/a	40DAP	D								
14	REALM Q					4	oz/a	40DAP	D	19.9 a	54.0 a	181 a	4 hi	2 hi	0 e		
14	RESOLVE SG	25	SG	0.0188	lb ai/a			40DAP	D								
14	DPX-4145	50	WG	0.0094	lb ai/a			40DAP	D								
14	MESOTRIONE	50	WG	0.078	lb ai/a			40DAP	D								
14	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	40DAP	D								
14	AMS	100	SG		2 lb/a		2 lb/a	40DAP	D								
15	COUNTER 20 G	20	GR		1.2 oz ai/1000 row-ft			ATPLANT	A	20.4 a	53.9 a	167 abc	12 f	10 ef	5 d		
15	RESOLVE Q	22.4	WG			1.25	oz/a	40DAP	D								
15	RESOLVE SG	25	SG	0.01437	lb ai/a			40DAP	D								
15	HARMONY SG	50	SG	0.00313	lb ai/a			40DAP	D								
15	DPX-4145	50	WG	0.00719	lb ai/a			40DAP	D								
15	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	40DAP	D								
15	AMS	100	SG		2 lb/a		2 lb/a	40DAP	D								
16	RESOLVE Q	22.4	WG			1.25	oz/a	40DAP	D	19.6 a	54.2 a	184 a	7 gh	0 i	0 e		
16	RESOLVE SG	25	SG	0.01437	lb ai/a			40DAP	D								
16	HARMONY SG	50	SG	0.00313	lb ai/a			40DAP	D								
16	DPX-4145	50	WG	0.00719	lb ai/a			40DAP	D								
16	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	40DAP	D								
16	AMS	100	SG		2 lb/a		2 lb/a	40DAP	D								
17	COUNTER 20 G	20	GR		1.2 oz ai/1000 row-ft			ATPLANT	A	20.5 a	53.8 a	176 ab	10 fg	6 fgh	3 de		
17	STEADFAST Q	37.7	WG			1.5	oz/a	40DAP	D								
17	ACCENT	75	WG	0.02362	lb ai/a			40DAP	D								
17	RESOLVE SG	25	SG	0.01172	lb ai/a			40DAP	D								
17	DPX-4145	50	WG	0.0078	lb ai/a			40DAP	D								
17	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	40DAP	D								
17	AMS	100	SG		2 lb/a		2 lb/a	40DAP	D								
18	STEADFAST Q	37.7	WG			1.5	oz/a	40DAP	D	20.6 a	53.7 a	170 abc	5 h	0 i	0 e		
18	ACCENT	75	WG	0.02362	lb ai/a			40DAP	D								
18	RESOLVE SG	25	SG	0.01172	lb ai/a			40DAP	D								
18	DPX-4145	50	WG	0.0078	lb ai/a			40DAP	D								
18	COC (PRIME OIL)	100	SL		1 % v/v		1 % v/v	40DAP	D								
18	AMS	100	SG		2 lb/a		2 lb/a	40DAP	D								
19	COUNTER 20 G	20	GR		1.2 oz ai/1000 row-ft			ATPLANT	A	20.2 a	53.9 a	174 ab	0 i	0 i	0 e		
19	NO HERBICIDES																

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Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-7-11 Moisture Percent	ZEAMD 10-7-11 Test wt. lb/bu	ZEAMD 10-7-11 Yield bu/A	ZEAMD Injury Percent 7 DAT	ZEAMD Injury Percent 14 DAT	ZEAMD Injury Percent 28 DAT
20	NO INSECTICIDE									19.3 a	54.3 a	181 a	0 i	0 i	0 e
20	NO HERBICIDES														
LSD (P=.05)										4.54	1.51	20.3	4.5	5.3	4.7
Replicate F										6.126	6.755	0.856	1.518	0.176	1.273
Replicate Prob(F)										0.0049	0.0031	0.4337	0.2328	0.8394	0.2922
Treatment F										0.714	0.602	6.820	76.943	45.074	27.972
Treatment Prob(F)										0.7823	0.8815	0.0001	0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: DuPont (112).
2. Ratings: CI at 7, 14, and 28 DAT; Describe injury symptoms in comments.
3. Apply Counter 20 G in-furrow at 1.2 oz ai/1000 linear foot of row to all four rows in the plot.
Apply herbicides to the center two rows (5 ft boom).
4. Yield and seed moisture.
5. Blanket PRE application of Degree Xtra (3 qt/A) plus Atrazine (1 lb ai/A) was applied to entire area on 5-31-11.
6. Missing data for plots 317 - 320 were due to flooding.
7. DAT = Days after various applications.
Ratings at 7 days after the 20DAP, 30DAP, and 40 DAP applications were on 6-27-11, 7-7-11, and 7-18-11, respectively.
Ratings at 14 days after the 20DAP, 30DAP, and 40 DAP applications were on 7-4-11, 7-14-11, and 7-25-11, respectively.
Ratings at 28 days after the 20DAP, 30DAP, and 40 DAP applications were on 7-18-11, 7-28-11, and 8-8-11, respectively.
8. Injury symptoms were slight chlorosis, but mostly internode stacking (stunting).
9. Harvested 10-7-11, (2) 30 inch rows by 24 ft.