

Endigo ZC Insect Control in Corn.

Trial ID: 11-ARC-N9-E110 Location: Agronomy Res. Center

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 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 5-20-11

Objectives: Evaluate the efficacy of Endigo ZC and other foliar insecticides on silk clipping insects and other insect pests.

Crop 1: ZEAMD Dent corn Variety: DKC 64-82 Description: RR2
 Planting Method: SEEDED Planting Date: 5-20-11
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Code: NA

Plot Width, Unit: 15 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: REDUCED-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year

1. GLXMA 2010

Field Prep./Maintenance: N 178 LB/A, P205 46 LB/A, K20 300 LB/A

% OM: 1.6 Texture: SILT LOAM
 pH: 6.6 Soil Name: WEIR
 CEC: 7.5 Fert. Level: P1: 95 LB/A, K: 244 LB/A

Application Description

A
 Application Date: 7-22-11
 Time of Day: 13:00
 Application Method: Spray
 Application Timing: THRESH
 Application Placement: BROFOL
 Applied By: JRK
 Air Temperature, Unit: 100 F
 % Relative Humidity: 47
 Wind Velocity, Unit: 5 MPH
 Wind Direction: E
 Dew Presence (Y/N): N
 Soil Moisture: NORMAL
 % Cloud Cover: 30

22-7-11
 Crop stage at application: R1
 Height Min, Max (inch): 110 120

Pest Stage At Each Application

Application Date: 7-22-11
 Weed Code: NA
 Stage Majority (leaves): NA

Application Equipment

Appl. Equipment: CO2 sprayer
 Operating Pressure: 35 PSI
 Nozzle Type: Flat fan
 Nozzle Size: XR 110015
 Boom Length, Unit: 5 FT
 Spray Volume, Unit: 10 GPA

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Pest Code										INSECTS	INSECTS
Crop Code										ZEAMD	ZEAMD
Rating Date										8-5-11	8-19-11
Rating Data Type										Number per	Number per
Rating Unit										10 Ears	10 Ears
Rating Timing											
Trt-Eval Interval										3 DA-A	7 DA-A
										14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Moisture Percent	Test wt. lb/bu	Yield bu/A	ZEAMD 9-29-11 Injury Percent	ZEAMD 7-25-11 Injury Percent	INSECTS ZEAMD 8-5-11 Number per 10 Ears	INSECTS ZEAMD 8-19-11 Number per 10 Ears
1	NONTREATED									19.5 a	57.3 a	142 a	0 a	0 a	0.3 a	1.0 ab
2	ENDIGO	2.06	ZC	0.0644	lb ai/a	4	fl oz/a	THRESH	A	19.7 a	57.2 a	151 a	0 a	0 a	0.8 a	0.5 ab
	2 COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH	A							
3	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	THRESH	A	19.7 a	57.3 a	143 a	0 a	0 a	0.3 a	0.5 ab
	3 COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH	A							
4	WARRIOR II	2.09	CS	0.0314	lb ai/a	1.92	fl oz/a	THRESH	A	19.6 a	57.3 a	158 a	0 a	0 a	0.3 a	0.0 b
	4 COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH	A							
5	ACTARA	25	WG	0.086	lb ai/a	5.5	oz/a	THRESH	A	18.5 a	57.5 a	151 a	0 a	0 a	1.0 a	1.3 a
	5 COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH	A							
6	VOLIAM XPRESS	1.25	ZC	0.088	lb ai/a	9	fl oz/a	THRESH	A	19.5 a	57.3 a	156 a	0 a	0 a	0.5 a	0.5 ab
	6 COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH	A							
7	BAYTHROID XL	1	EC	0.0219	lb ai/a	2.8	fl oz/a	THRESH	A	19.6 a	57.4 a	153 a	0 a	0 a	0.8 a	0.8 ab
	7 COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH	A							
8	COBALT ADVANCED	2.63	EC	0.66	lb ai/a	32	fl oz/a	THRESH	A	19.4 a	57.4 a	151 a	0 a	0 a	0.8 a	0.3 ab
LSD (P=.05)										1.46	0.46	22.9	0.0	0.0	1.13	1.12
Replicate F										1.266	0.389	5.345	0.000	0.000	1.768	1.781
Replicate Prob(F)										0.3118	0.7623	0.0096	1.0000	1.0000	0.1842	0.1815
Treatment F										0.593	0.379	0.546	0.000	0.000	0.576	1.103
Treatment Prob(F)										0.7543	0.9043	0.7874	1.0000	1.0000	0.7676	0.3972

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

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Pest Code	EAR DMG	KER DMG	EAR DMG	KER DMG
Crop Code	ZEAMD	ZEAMD	ZEAMD	ZEAMD
Rating Date	8-5-11	8-5-11	8-19-11	8-19-11
Rating Data Type	Incidence	Severity	Incidence	Severity
Rating Unit	Percent	0-9	Percent	0-9
Rating Timing				
Trt-Eval Interval	14 DA-A	14 DA-A	28 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	EAR DMG	KER DMG	EAR DMG	KER DMG
1	NONTREATED									98 a	0.55 a	95 a	0.23 a
2	ENDIGO	2.06	ZC	0.0644	lb ai/a	4	fl oz/a	THRESH A		93 a	0.33 ab	90 a	0.18 a
2	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH A					
3	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	THRESH A		85 a	0.30 ab	78 a	0.18 a
3	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH A					
4	WARRIOR II	2.09	CS	0.0314	lb ai/a	1.92	fl oz/a	THRESH A		88 a	0.30 ab	75 a	0.23 a
4	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH A					
5	ACTARA	25	WG	0.086	lb ai/a	5.5	oz/a	THRESH A		88 a	0.45 ab	90 a	0.35 a
5	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH A					
6	VOLIAM XPRESS	1.25	ZC	0.088	lb ai/a	9	fl oz/a	THRESH A		98 a	0.48 ab	75 a	0.15 a
6	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH A					
7	BAYTHROID XL	1	EC	0.0219	lb ai/a	2.8	fl oz/a	THRESH A		90 a	0.25 b	88 a	0.18 a
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	THRESH A					
8	COBALT ADVANCED	2.63	EC	0.66	lb ai/a	32	fl oz/a	THRESH A		95 a	0.25 b	75 a	0.15 a
LSD (P=.05)										13.1	0.252	20.6	0.290
Replicate F										1.300	5.413	1.036	3.149
Replicate Prob(F)										0.3006	0.0064	0.3969	0.0465
Treatment F										1.165	1.749	1.405	0.448
Treatment Prob(F)										0.3633	0.1516	0.2552	0.8607

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

Trial Comments

1. Protocol: Syngenta (TH001A).
2. Ratings: CI at 3 and 7 DAT; Continue ratings if injury persists;
Insect counts (insects per 10 ears), percent insect control and percent ear damage at 14 DAT;
Evaluate residual control at 28 DAT (percent control).
3. Threshold timing is when the insect population is increasing.
4. No yield required. Ask Syngenta about fate of harvested grain.
5. Blanket PRE application of Lumax (2.5 qt/A) plus Aatrex (1.0 lb/A) was applied to entire plot area on 5-24-11.
6. Application details: Plots are 6 rows, staked center, sprayed center, spray 4 rows (10 ft),
make 2 passes with a 5 ft boom, 30-40 PSI.
7. Insects found on ears were corn earworm and European corn borer.
8. EAR DMG = Ear damage, percent of ears that were damaged, 10 ears were examined.
KER DMG = Kernal damage, percent of the kernals consumed, average of 10 ears, all values less than 1.0,
0 = less than 10%, 9 = greater than 90%.
9. Plot 105 had poor pollination, raccoon damage and was phenologically late.
Missing yield data due to raccoon damage on edge of plot area.
10. Harvested 9-29-11, (2) 30 inch rows by 28 ft.