

Wireworm Management in Field Corn Using Seed Treatments and Soil Insecticides, 2004: J. Whalen and M. Spellman

(Entomology) and B. Uniatowski (Plant Science)

'N70-D5' was planted on April 22 at Murray Brothers Farms located near Selbyville, DE and ByField Farms located near Felton, DE. Four-row 30 foot long plots on 30-inch centers were replicated 4 times in a RCB design. Seeds treatments were commercially applied by Gustafson and Syngenta Seeds. The liquid in-furrow treatments were applied in 5.5 gallons of water per acre. Stand counts and wireworm damaged plants were evaluated on a 7-10 day basis from May 5 through June 17. Yields were taken from the center two rows of each plot on September 3 in Selbyville and Sept 14 in Felton. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

Wireworm pressure was low - moderate. On May 5, all treatments provided significantly better wireworm control compared to the untreated check except Agrox Premiere at the Selbyville location. No phytotoxicity was observed.

Location #1 – Murray Farms, Selbyville, DE

I. Insect Damage Data

Treatment	Rate	% Wireworm Damaged Plants		
		May 5	May11	May 18
Poncho 250	0.25 mg ai/seed	0.0b	0.00b	0.30a
Poncho 1250	1.25 mg ai/seed	0.0b	0.00b	0.00a
Cruiser 5F	0.125 mg ai/seed	0.0b	0.73ab	1.00a
Cruiser 5F	1.25mg ai/seed	0.0b	0.00b	0.00a
Cruiser 5 F + Warrior	0.125 mg ai/seed+ 3.84oz/A	0.0b	0.26b	0.51a
Warrior	3.84 oz/A	0.0b	0.99ab	1.78a
Mustang MAX	4 oz/A	0.0b	1.20ab	1.53a
Concur	1.5 oz/42 lbs	0.0b	3.90a	2.10a
Agrox Premiere	1.5 oz/42 lbs	1.0a	2.65ab	0.28a
Untreated	-----	1.4a	1.98ab	1.91a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).

II. Stand Count and Yield Data

Treatment	Yield BU/A	Plants per 60 ft of row		
		May 5	May 11	May 18
Poncho 250	164.14a	100.5a	102.3a	100.0a
Poncho 1250	162.07a	101.3a	100.5a	100.3a
Cruiser 5F	158.38a	103.0a	103.0a	102.3a
Cruiser 5F	162.82a	99.8a	103.0a	102.3a
Cruiser 5 F + Warrior	170.01a	99.8a	103.0a	101.8a
Warrior	163.34a	98.5a	100.8a	99.0a
Mustang MAX	155.48a	94.8a	96.0a	93.8a
Concur	161.10a	100.5a	102.3a	99.3a
Agrox Premiere	149.06a	101.8a	101.8a	99.0a
Untreated	149.44a	92.0a	95.0a	92.5a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05)

Location #1 – ByField Farms, Felton, DE

I. Insect Damage Data

Treatment	Rate	% Wireworm Damaged Plants			
		May 4	May 10	May 17	May 24
Poncho 250	0.25 mg ai/seed	0.00a	0.72a	0.25a	0.00a
Poncho 1250	1.25 mg ai/seed	0.00a	0.48a	0.49a	0.26a
Cruiser 5F	0.125 mg ai/seed	0.00a	0.50a	0.50a	0.00a
Cruiser 5F	1.25mg ai/seed	0.00a	0.48a	0.00a	0.0a
Cruiser 5 F + Warrior	0.125 mg ai/seed+ 3.84oz/A	0.00a	0.48a	0.23a	0.00a
Warrior	3.84 oz/A	0.23a	1.92a	1.00a	0.76a
Mustang MAX	4 oz/A	0.00a	0.51a	0.26a	0.51a
Concur	1.5 oz/42 lbs	0.00a	0.75a	0.52a	0.76a
Agrox Premiere	1.5 oz/42 lbs	0.00a	0.45a	0.46a	0.49a
Untreated	-----	0.52a	2.58a	1.10a	0.29a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).

II. Stand Count and Yield Data

Treatment	Yield	Plants per 60 ft of row			
		May 4	May 10	May 17	May 24
Poncho 250	190.0a	103.0a	103.5a	102.8a	100.8a
Poncho 1250	190.4a	102.5a	103.8a	103.5a	102.0a
Cruiser 5F	188.1a	101.5a	102.5a	102.5a	100.0a
Cruiser 5F	179.8a	102.3a	103.5a	102.5a	101.3a
Cruiser 5 F + Warrior	181.9a	101.0a	102.8a	102.5a	98.8a
Warrior	185.2a	104.3a	104.3a	101.a	99.5a
Mustang MAX	179.8a	95.8a	98.0a	98.3a	96.0a
Concur	189.9a	101.0a	102.0a	102.0a	97.8a
Agrox Premiere	191.0a	105.8a	106.3a	107.0a	102.3a
Untreated	186.7a	101.0a	101.0a	98.3a	95.5a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).