

Wireworm Management in Potatoes, 2003: 'Superior' potatoes were planted on April 22, 2003 in a commercial field at ByField Farms Inc., Felton, DE. Plots consisted of two 25-ft-long plots planted on 3- ft centers. Each treatment was replicated 4 times in a RCB design. Broadcast pre-plant applications were applied in 18.5 gallons of water per acre @ 40 psi and incorporated immediately before planting with a rototiller. Liquid in-furrow treatments were applied directly in-furrow over the seed piece with a one-nozzle hand-held sprayer delivering 9.5 gals per acre @40 psi . All Vydate treatments were applied as a broadcast spray over the rows using a hand-held sprayer delivering 18.5 gal/A @ 40 psi and incorporated with normal cultivation procedures. Granular treatments were applied in-furrow at planting with a hand-held shaker. The post emergence Regent treatment was applied on each side of the row with a one-nozzle hand-held sprayer delivering 19 gpa @ 40 psi and incorporated with the last cultivation In season, all the tubers from 7 ft of row were collected from each treatment on June 16, July 15 and July 29. All tubers were evaluated for the percentage of tubers damaged by wireworm and the number of wireworm entrance holes per tuber. One row of each plot was harvested on Aug 5 and all A- grade tubers were weighed. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

Wireworm pressure was high. Capture and the in-furrow applications of Regent and Thimet provided significantly better season long control of wireworm compared to the untreated check. No phytotoxicity was observed.

1. Wireworm Damaged Tubers

Treatment	Application Timing And Date	Rate/A	% WW Damaged Tubers		
			June 16	July 15	July 29
Vydate CLV	Emergence- 5/15	2 qt(50%band)			
Vydate CLV	2 weeks later- 5/29	1 qt broadcast			
Vydate CLV	21 days later- 6/18	1 qt broadcast	29.51a	49.88abcd	44.76abc
Vydate CLV	Emergence/dragoff	2 qt – 50% band	20.72a	54.59abc	50.14ab
Vydate CLV	2 weeks after emergence- 5/29	1 qt broadcast			
Vydate CLV	21 days later-6/18	1 qt broadcast	26.93a	40.19bcde	50.24ab
Capture 2EC	In-Furrow	19.2 oz/A	8.39a	20.43cde	26.84bcd
Capture 2EC	Broadcast/incorporated before planting-4/22	19.2 oz	4.12a	9.93e	12.78cd
Regent 4SC	In-Furrow-4/22	3.46 oz	1.97a	6.78e	9.22d
Regent 4SC	Last Cultivation-6/18	3.46 oz	23.64a	47.99abcd	45.34abc
Diazinon AG500	Broadcast/incorporated before planting-4/22	1 gal	19.89a	38.32bcde	39.83abcd
Diazinon AG500	Emergence- 5/15	1 gal	29.43a	64.41ab	62.18a
Thimet 20G	In-furrow	10.3 lb/A	6.47a	16.09de	18.75bcd
Untreated	---	---	25.38a	80.21a	64.04a

Means within a column followed by the same letter are not significantly different (Ryans' Q; P = 0.05).

2. Number Holes per Tuber

Treatment	Application Timing and Date	Yield CWT/A August 5	Mean Number Wireworm Holes per Tuber		
			June 16	July 15	July 29
Vydate CLV	Emergence- 5/15				
Vydate CLV	2 weeks later- 5/29				
Vydate CLV	21 days later- 6/18	287.68a	0.68a	0.93ab	0.78ab
Vydate CLV	Emergence/dragoff	321.02a	0.38a	0.81ab	0.96ab
Vydate CLV	2 weeks after emergence- 5/29				
Vydate CLV	21 days later-6/18	338.77a	0.62a	0.67b	0.75ab
Capture 2EC	In-Furrow	343.84a	0.09a	0.37b	0.33b
Capture 2EC	Broadcast/incorporated before planting-4/22	354.71a	0.05a	0.16b	0.15b
Regent 4SC	In-Furrow-4/22	417.70a	0.02a	0.09b	0.10b
Regent 4SC	Last Cultivation-6/18	361.60a	0.49a	0.80ab	0.67ab
Diazinon AG500	Broadcast/incorporated before planting-4/22	363.40a	0.31a	0.87ab	0.73ab
Diazinon AG500	Emergence- 5/15	332.36a	0.57a	1.04ab	1.42a
Thimet 20G	In-furrow	304.35a	0.09a	0.21b	0.24b
Untreated	---	363.77a	0.36a	1.98a	0.84ab

Means within a column followed by the same letter are not significantly different (Ryans' Q; P = 0.05).