

III. Root-Feeding Coleoptera and Symphylans

CONTROL OF SUGAR BEET WIREWORMS WITH TELONE* SOIL FUMIGANTS

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The sugar beet wireworm (Limonis californicus) can be a major pest in vegetable crops in the Columbia Basin, Washington. Crop rotation can keep populations low, however, insecticide applications often are needed to prevent damage. TELONE Soil Fumigants are commonly used throughout the Basin for nematode and/or disease control. Wireworms are an additional labeled pest. This data demonstrates that wireworm control can be a side benefit of TELONE soil fumigation intended for other pest organisms.

TELONE II (20 gpa) and TELONE C-17 (24 gpa) was shank-applied 18" deep as a broadcast treatment in the Fall of 1987. Pre-treatment wireworm counts were considered high, averaging 1 wireworm/sq.ft. Onions were planted and at 8 to 10" plant height in June 1988 stand counts were taken. No differences between the TELONE treatments were observed, but the significant 2-fold increase in the treatments over the check was highly visible. At harvest in September, yields were comparable between the TELONE treatments, however usable yields averaged nearly 4-fold greater with TELONE than without and jumbo yields averaged nearly 5-fold greater with TELONE. The percent usable yields also were greater in the TELONE treatments than in the check. Since no differences were observed between TELONE II and TELONE C-17, the increases in plant stand counts and subsequently in yields were likely due primarily to the insecticidal activity of the 1,3-D on wireworms rather than the fungicidal activity of the chloropicrin.

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CONTROL OF WIREWORMS IN ONIONS IN WASHINGTON, 1987-88.

Treatment ¹	Rate (gpa)	# plants/sq m ²	Yield ³		
			Usable ⁴	%Usable ⁵	Jumbo ⁶
TELONE II	20	25.5 a ⁷	1284.5 a	98.5 a	1162.0 a
TELONE C-17	24	25.2 a	1218.7 a	97.0 ab	1123.6 a
Check	--	12.4 b	313.8 b	88.5 b	241.9 b

¹Applied 21 October 1987.

²Evaluated at 8-12 inch plant height (21 June 1988).

³6 September 1988.

⁴Greater than 2 inches diameter.

⁵Percent of total yield, including undersized and culls.

⁶Greater than 3 inches diameter.

⁷Values in a column followed by the same letter are not significantly different (p 0.5).