

Tolerance of Parsley Grown for Seed to Linuron (Lorox)

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Introduction

Linuron (Lorox[®]) is a key component in current weed control practices for carrot. Carrot tolerance to linuron is well understood. Parsley is closely related to carrot, both are in the plant family Apiaceae, but there are no crop safety data to support linuron use on parsley. The objective of this research is to evaluate the tolerance of parsley grown for seed to linuron.

Methods and Materials

Two field trials were conducted in commercial fields of parsley grown for seed, one near Culver, Oregon and the other near Madras, Oregon. The trial near Culver consisted of 10-ft by 36-ft plots and the trial near Madras consisted of 10-ft by 30-ft plots; both were arranged in randomized complete blocks replicated four times. Herbicides were applied with a CO₂-pressurized backpack sprayer delivering 20 gal/acre at 40 psi at the rates and timings shown in Table 1. Crop injury was evaluated visually with a 0 to 100 percent rating scale.

Results and Discussion

The leaf-type parsley in the field near Culver did not survive the winter, so the June application was not made at that location and there were no plants to evaluate for injury from the September application. It seems likely that parsley would be more susceptible to herbicide injury from September applications than June applications because the parsley is much smaller in September. In the root-type parsley field near Madras, the June linuron application was made after the last cultivation of the season (lay-by).

Parsley injury from linuron was minor at all the rates and application timings shown in Table 1. The injury that was observed did not persist for long. Neither site had weed populations that were sufficient to evaluate.

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Table 1. Response of two types of parsley grown for seed to linuron (Lorox) herbicide in Jefferson County, Oregon, 2007-2008.

Parsley	Treatment ¹ ai/acre	01/Oct/07	08/Oct/07	15/Oct/07	09/Jun/08	20/Jun/08	30/Jun/08
----- % injury -----							
Root-type²							
	1.0 lb on 24/Sep/07 +						
	1.0 lb on 2/Jun/08	0	1	3	0	0	0
	2.0 lb on 24/Sep/07 +						
	2.0 lb on 2/Jun/08	0	4	8	0	0	0
Leaf-type³							
	1.0 lb on 24/Sep/07	0	2	0	--	--	--
	2.0 lb on 24/Sep/07	0	7	3	--	--	--

¹ Linuron applications included R-11 nonionic surfactant at 0.25% v/v. At the time of 24 September 2007 applications the parsley had three to six leaves at both locations. At the time of the 2 June 2008 application the parsley was bolting.

² Root-type was grown near Madras, Oregon.

³ Leaf-type was grown near Culver, Oregon and did not survive the winter.