

## EVALUATION OF LAYBY HERBICIDE APPLICATIONS ON SEED CARROTS AND PARSLEY, 1996-1997

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### Abstract

*Herbicides Caparol (prometryn) and Lorox (linuron) were applied both broadcast in the fall, and at layby in the spring to seed carrots (*Daucus carota*) and parsley (*Petroselinum crispum*) near Madras, Oregon. Efficacy data were not collected because recent cultivation of plots prior to plot evaluations. Apparent crop stunting was observed during March before regrowth. Temporary crop stunting appeared to increase with increased rates of Caparol, and with the addition of Lorox. Crop stunting was not observed one month following herbicide applications or after the second application and regrowth in the spring in early June*

### Introduction

Caparol (prometryn) received registration for postemergence broadleaf and grass control in seed carrots, parsley, dill, and parsnips in Washington during 1996. To receive registration in Oregon, data needed to be generated in central Oregon for the seed crops of interest, which are carrots, parsley, coriander and dill. The objective of this project was to provide efficacy and phytotoxicity data by evaluating fall broadcast and spring layby applications of Caparol alone and in combination with Lorox (linuron) to carrots and parsley grown commercially for seed near Madras and Culver, Oregon.

### Methods and Materials

The 1996-1997 herbicide evaluations were conducted on parsley (*Petroselinum crispum*) with Ron Hume north of Madras, and on carrots (*Daucus carota*) with Jack Ikler near Culver. Caparol at 2 and 4 pt/a, and Caparol at 2 pt/a plus Lorox at 1 lb/a were applied twice to the same plots. Treatments were applied on November 7, 1996, and May 9, 1997, to seed carrots, and on November 7, 1996, and May 12, 1997, to seed parsley. Herbicides were applied with a CO<sub>2</sub> pressurized, hand-held, boom sprayer at 40 psi and 20 gal/a water. Plots 10 ft x 20 ft were replicated three times in a randomized complete block design. Carrots were evaluated December 4, 1996, March 13 and June 5, 1997; while the parsley was evaluated December 6, 1996, March 13 and June 4, 1997. Both crops were evaluated for stunting only, because no weed pressure was present.

### Results and Discussion

Evaluation of weed control was not possible because plots had been recently cultivated at the time of evaluations in December and May. However, efficacy data are available from previous research in central Oregon and other locations. Crop stunting was not observed in December after fall or in June following spring applications. However, stunting was observed for both carrots and parsley during the March evaluation. Presumably, this was due to a combination of herbicide and winter stress factors. Caparol alone at 2 pt/a produced no stunting on carrots and

only slight stunting on parsley. Increased stunting was observed on both crops following application of Caparol at 4 pt/a, and the combination of Caparol at 2 pt/a plus Lorox at 1 lb/a. No stunting was observed after regrowth in the spring and the May applications to the same plots.

Table 1. Crop stunting after Caparol applications November 7, 1996, and May 9, 1997, on seed carrot; and November 7, 1996, and May 12, 1997, on seed parsley near Madras, OR.

Treatments	Rate (product/a)	Crop Stunting'					
		Carrots			Parsley		
		Dec4	Mar 13	Jun5	Dec4	Mar 13	Jun 4
				----- (%)-----			
1 Caparol	2 pt	0	0	0	0	13	0
2 Caparol	4 pt	0	13	0	0	20	0
3 Caparol	2 pt						
+Lorox	1 lb	0	22	0	0	43	0
4 Untreated		0	0	0	0	0	0

'Visual evaluation for percent crop stunting.