

# EVALUATION OF LAREDO<sup>®</sup> TO CONTROL POWDERY MILDEW ON SEED CARROTS GROWN IN CENTRAL OREGON, 2005

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## Abstract

The fungicide Laredo<sup>®</sup> (myclobutanil) was evaluated for control of powdery mildew in a commercial field of Nantes carrots grown for seed near Madras, Oregon. Four rates of Laredo were evaluated for control of powdery mildew. Evaluation showed an increase of powdery mildew in untreated plots, while treated plots remained uninfected.

## Introduction

Carrot seed production is important to the sustained economic viability of the agricultural community in central Oregon. Hybrid carrots are grown on an average of 1,850 acres in central Oregon and produce an average annual income of \$6.36 million.

## Methods and Materials

A preapplication evaluation of powdery mildew in the plot area was conducted on June 20, 2005. Laredo was applied June 20 at 6, 8, 16, and 20 oz/acre in a commercial field of Nantes carrots grown for seed near Madras, Oregon. Fungicide treatments were applied to 10-ft by 20-ft plots replicated two times in a randomized complete block design using Tee Jet 8002 nozzles on a 9-ft, CO<sub>2</sub>-pressurized, hand-held boom sprayer at 40 psi and 20 gal of water/acre. A non-ionic surfactant was added at a rate of 0.25 percent v/v to all treatments. Postapplication evaluations were conducted July 11 (21 days after treatment [DAT]) and July 29 (39 DAT). The stems, foliage, and heads were evaluated separately in each plot. Evaluations were made using a rating scale of 0 to 5, with 0 being no mildew present and 5 indicating total coverage.

## Results and Discussion

The pre-evaluation indicated a low level of powdery mildew in the plot area. Evaluations on July 11 (21 DAT) showed an increase in powdery mildew in the untreated plots while the treated plots remained uninfected by powdery mildew. Powdery mildew infection spread by July 29 (31DAT) on both the foliage and heads in the untreated plots (Table 1). Although powdery mildew levels on the untreated stems increased by 1.5 points over those of the treated plots, the increase was statistically not significant. Powdery mildew levels across the four application rates were not significantly different.

Table 1. Level of powdery mildew on carrots grown for seed near Madras, Oregon following application of Laredo on June 20, 2005 and evaluated on June 20, July 11, and July 29, 2005.

Treatment	Application rate/acre	Pre-evaluation			Post evaluation					
		June 20			July 11 (21 DAT)			July 29 (39 DAT)		
		Stem	Foliage	Head	Stem	Foliage	Head	Stem	Foliage	Head
Laredo <sup>a</sup>	6 oz	0.0 <sup>b</sup> b <sup>c</sup>	0.0	0.0	0.0 b	0.0	0.0	1.0	0.5 b	0.0 b
Laredo	8 oz	0.0 b	0.0	0.0	0.0 b	0.0	0.0	1.25	0.0 b	0.0 b
Laredo	16 oz	0.0 b	0.0	0.0	0.0 b	0.0	0.0	1.25	0.5 b	0.5 b
Laredo	24 oz	0.0 b	0.0	0.0	0.0 b	0.0	0.0	1.0	0.0 b	0.0 b
Untreated	----	1.0 a	0.0	0.0	1.5 a	1.25	1.0	2.75	2.75 a	2.0 a
			NS	NS		NS	NS	NS		

<sup>a</sup>Laredo = myclobutanil 2 lb/gal.

<sup>b</sup>Rating scale was 0 (no mildew) to 5 (total leaf coverage).

<sup>c</sup>Mean separation with LSD at  $P \leq 0.05$ .