

EVALUATION OF LAYBY HERBICIDE APPLICATIONS ON SEED CARROTS, 1996

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Abstract

Herbicides prometryn (Caparol, Ciba), linuron (Lorox, Du Pont), metribuzin (Sencor, Bayer), bromoxynil (Buctril, Rhone-Poulenc), and pendimethalin (Prowl, Cyanamid) were applied alone, and/or in combination, as a directed spray at layby to seed carrots near Culver, Oregon. Buctril at 1 pt/a plus Sencor at 0.3 lb/a, and Caparol at 1 pt/a plus Lorox at 2 lb/a plus Sencor at 0.3 lb/a provided 99 and 98 percent control of common groundsel, and 97 percent control of hairy nightshade. Treatments that included Sencor at 0.3 lb/a provided the greatest weed control. Burning of lower leaves resulted from treatment with Buctril at 1 pt/a plus Sencor at 0.3 lb/a.

Introduction

This is the second year for evaluation of herbicides applied at layby to seed carrots in central Oregon. The objective of this project was to evaluate Caparol, Lorox, Sencor, Buctril, and Prowl applied at layby for control of broadleaf weeds in seed carrots grown commercially near Culver, Oregon.

Methods and Materials

Herbicides Caparol at 2 and 4 pt/a, Caparol at 1 and 2 pt/a plus Lorox at 2 lb/a, Caparol at 1 pt/a plus Sencor at 0.3 lb/a, Caparol at 1 pt/a plus Prowl at 2 pt/a, Caparol at 1 pt/a plus Lorox at 2 lb/a plus Sencor at 0.3 lb/a, and Buctril at 1 pt/a plus Sencor at 0.3 lb/a were applied June 19 with a CO₂ pressurized, hand-held, sprayer with a 15004 TeeJet nozzle at 35 psi and 20 gal/a water.

The treatments applied layby were directed at the furrow and base of the plants. A nonionic surfactant was applied at 1 pt/100 gal in combination with all treatments. Plots 10 ft x 20 ft were replicated three times in a randomized complete block design. Treatments were evaluated July 2 for control of

common groundsel and hairy nightshade. Reduction in stand and crop injury were rated visually.

Results and Discussion

Buctril at 1 pt/a plus Sencor at 0.3 lb/a provided 99 percent control of common groundsel and 97 percent control of hairy nightshade. Similar control was provided by Caparol at 1 pt/a plus Lorox at 2 lb/a plus Sencor at 0.3 lb/a, with 98 percent control of common groundsel and 97 percent control of hairy nightshade. With somewhat less control was Caparol at 1 pt/a plus Sencor at 0.3 lb/a providing 94 percent control of groundsel and 88 percent control of hairy nightshade. All three of these treatments, which provided the highest level of weed control, included Sencor at 0.3 lb/a. Caparol at 4 pt/a provided a total of 88 percent weed control compared to 66 percent at 2 pt/a. Inadequate weed control was provided by Caparol at 1 pt/a in combination with either Lorox at 2 lb/a or Prowl at 2 pt/a. There was no reduction in carrot stand, but burning was observed on the lower leaves of plants treated with Buctril at 1 pt/a plus Sencor at 0.3 lb/a.

Table 1. Effect of layby herbicide applications on commercial seed carrots near Culver, Oregon on June 19, 1996.

Treatments ¹	Rate	Weed Control ¹		
		Common groundsel	Hairy nightshade	Tot weeds
	(product/a)		(percent)-----	
Caparol	2 pt	62 ab ²	70 a	66
Caparol	4 pt	83 ab	93 a	88
Caparol	1 pt			
+ Lorox	2 lb	60 ab	53 a	57
Caparol	2 pt			
+ Lorox	2 lb	65 ab	90 a	78
Caparol	1 pt			
+ Sencor	0.3 lb	94 a	88 a	91
Caparol	1 pt			
+ Prowl	2 pt	47 b	67 a	57
Caparol	1 pt			
+ Lorox	2 lb			
+ Sencor	0.3 lb	98 a	97 a	98
Buctril	1 pt			
+ Sencor	0.3 lb	99 a	97 a	98
Untreated		0 c	0 b	0

¹ Visual evaluation was conducted August 14, 1996.

² Treatments applied July 27, 1996.

³ Mean separation with Honestly Significant Difference at P 0.05.