

# COMMON GROUNSEL CONTROL IN MINT WITH SPRING POSTEMERGENCE HERBICIDE APPLICATIONS

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## Introduction

Weed control in mint is essential in order to maintain high mint oil yields and quality. Reducing competition from weeds may prolong the productive life of a mint stand. Common groundsel is becoming established in the Treasure Valley and can be difficult to control in mint. Effective herbicide programs for controlling common groundsel in mint need to be identified.

## Methods

A trial was established in a cooperator's field that had a dense population of common groundsel. Herbicide treatments were applied with a CO<sub>2</sub>-pressurized backpack sprayer calibrated to deliver 20 gal/acre at 30 psi. Plots were 10 ft wide and 30 ft long and treatments were arranged in a randomized complete block design with four replications. Treatments were applied on March 22 to mint that was approximately 1/4 inch tall and to 2-inch-high common groundsel. Treatments included Buctril (0.25 lb ai/acre), Stinger (0.124 lb ai/acre), Goal (0.094 lb ai/acre), Gramoxone Extra (0.47 lb ai/acre), and Tough (0.94 lb ai/acre) applied alone and in various combinations. Mint injury and common groundsel control were visually evaluated on March 28, April 13, May 2, and May 16. Data were analyzed using ANOVA, and treatment means were separated using a protected least significant difference at the 5 percent level, LSD (0.05).

## Results

Treatments containing Gramoxone Extra caused among the highest injury 6 and 22 days after treatment (DAT) (Table 1). Injury from Gramoxone Extra was attributed to application to non-dormant mint and was characterized by burning of mint foliage. Injury 55 DAT ranged from 0 to 19 percent and was greater with treatments including Gramoxone Extra or Buctril.

Common groundsel control 22 DAT ranged from 36 to 98 percent and was greatest in plots treated with Gramoxone Extra and with Buctril applied with either Stinger or Tough (Table 1). Common groundsel control with Stinger plus a non-ionic surfactant increased 62 percent between April 13 (22 DAT) and May 16 (55 DAT). While groundsel control with Stinger was low initially, it effectively suppressed the groundsel and allowed the mint to form a canopy over the row. All treatments except Goal plus crop oil concentrate and Tough plus crop oil concentrate provided greater than 85 percent control of common groundsel on May 16 (55 DAT).

Table 1. Mint injury and common groundsel control with postemergence herbicides, Malheur Experiment Station, Oregon State University, Ontario, OR, 2001.

Treatment*	Rate† lb ai/acre	Mint injury				Groundsel control		
		3-28	4-13	5-2	5-16	4-13	5-2	5-16
		----- % -----						
Buctril	0.25	5	7	7	16	64	80	85
Stinger + NIS	0.124 + 0.25%	10	0	6	8	36	88	98
Goal + COC	0.094 + 1.0%	38	16	6	1	37	59	53
Gramoxone Extra + NIS	0.47 + 0.25%	68	35	13	19	97	97	97
Buctril + Stinger	0.25 + 0.124	4	6	9	14	93	98	98
Gramoxone Extra + Goal + COC	0.47 + 0.094 + 1.0%	70	34	16	18	98	98	98
Tough + COC	0.94 + 1.0%	5	4	4	3	42	73	78
Gramoxone Extra + Goal + Buctril	0.47 + 0.094 + 0.125	63	43	16	15	98	96	96
Buctril + Tough + COC	0.25 + 0.94 + 1.0%	4	21	11	13	96	98	96
Untreated	--	4	0	3	0	0	0	0
LSD (0.05)		8	8	NS	10	8	13	14

\*Treatments were applied on March 22.

†Non-ionic surfactant (NIS) and crop oil concentrate (COC) were applied at 0.25 and 1.0 percent v/v, respectively.