

# EVALUATION OF HERBICIDES FOR WEED CONTROL IN SEED ONIONS, 1998

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## Abstract

Prowl (pendimethalin) alone and in combination with Ramrod (propachlor) was applied to onions (*Allium cepa*) grown for seed in Madras, OR, in 1998. The best control across weed species was Prowl plus Ramrod with 99 percent control of redroot pigweed (*Amaranthus retroflexus*) and common mallow (*Malva neglecta*), 97 percent control of common purslane (*Portulaca oleracea*) and volunteer carrots (*Daucus carota*), 93 percent control of hairy nightshade (*Solanum sarrachoides*), and 88 percent control of shepherdspurse (*Capsella bursa-pastoris*).

## Introduction

With limited weed control tools for use in onion seed production, the search continues for additional herbicides that may be effective. This project focused on preemergence application of Prowl alone and in combination with Ramrod. Ramrod is currently one of the few herbicides registered for use on seed onions.

## Methods and Materials

Herbicide treatments were Prowl at 1 pt/a, Prowl at 2 pt/a, and Prowl at 1 pt/a plus Ramrod at 5 qt/a. Herbicides were applied after planting before the first irrigation July 22. Treatments were applied with a CO<sub>2</sub>-powered boom sprayer at 40 psi and 20 gal/a water. Plots 10 ft x 20 ft were replicated two times in a randomized complete block design. Plots were evaluated August 19 for control of redroot pigweed (*Amaranthus retroflexus*), hairy nightshade (*Solanum sarrachoides*), volunteer carrots (*Daucus carota*), shepherdspurse (*Capsella bursa-pastoris*), common purslane (*Portulaca oleracea*), and common mallow (*Malva neglecta*).

## Results and Discussion

Results from herbicide applications are provided in Table 1. The best control across weed species was Prowl at 1 pt/a plus Ramrod at 5 qt/a with 99 percent control of redroot pigweed and common mallow, 97 percent control of common purslane and volunteer carrots, 93 percent control of hairy nightshade, and 88 percent control of shepherdspurse. Prowl alone at 2 pt/a provided 95 percent control of common mallow, 93 percent control of hairy nightshade, but inadequate control of the other weed species. Prowl at 1 pt/a provided inadequate control of all weeds evaluated.

Table 1. Effect of preemergence treatment of herbicide applied to seed onions July 22 and evaluated on August 19, 1998, Madras, OR.

| Treatment | Rate  | Redroot pigweed | Hairy nightshade | Volunteer carrots | Shepherdspurse    | Common purslane | Common mallow |
|-----------|-------|-----------------|------------------|-------------------|-------------------|-----------------|---------------|
|           |       |                 |                  |                   | (% control) ----- |                 |               |
| Prowl     | 1 pt  | 10              | 18               | 30                | 20                | 15              | 8             |
| Prowl     | 2 pt  | 63              | 93               | 0                 | 63                | 70              | 95            |
| Prowl     | 1 pt  | 99              | 93               | 97                | 88                | 97              | 99            |
| +Ramrod   | 5 qts |                 |                  |                   |                   |                 |               |