

# EVALUATION OF PREEMERGENCE HERBICIDES ON DRY BEANS, 1999

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## Abstract

Seven herbicides were evaluated in a commercial pink bean field near Culver, Oregon. All herbicides were applied preplant except Frontier, which was applied postplant. Populations of common lambsquarters, redroot pigweed, and hairy nightshade were low in the trial area. The only treatments having more than two plants of any weed species were Micro-Tech plus Eptam with 19 common lambsquarters and Eptam plus Sonalan with six common lambsquarters.

## Introduction

This is the second season dry beans have been grown in central Oregon in recent years. There were about 900 acres of mostly pinks, with some reds and blacks. The objective of this research was to evaluate several herbicide combinations applied preemergence to determine an effective weed control strategy for dry bean production in central Oregon.

## Methods and Materials

Seven herbicides were evaluated in a commercial field of pink beans near Culver, Oregon. Plots 18 ft x 20 ft were replicated four times in a randomized complete block design. Herbicides were applied preplant on May 26 and incorporated with a commercial disking operation shortly after application; except Frontier, which was applied postplant on May 29 and incorporated with sprinkler irrigation within 12 to 24 hours. Treatments were applied with a CO<sub>2</sub> pressurized, hand-held boom sprayer at 40 psi and 20 gal/a water.

Plots were evaluated for stunting and the number of weeds per plot on July 1. Weed species present were common lambsquarters, redroot pigweed, and hairy nightshade. The maximum number of plants counted for any given weed species per plot was 25.

## Results and Discussion

There were relatively few weeds in the trial area (Table 1). The only treatments with more than two plants for any given weed species were Micro-Tech plus Eptam with 19 common lambsquarters and Eptam plus Sonalan with 6 common lambsquarters. This compares with the untreated, where there were 22 common lambsquarters, 15 redroot pigweed, and 11 hairy nightshade. No stunting was observed due to treatment effect.

Table 1. Effect of herbicide application on dry beans near Culver, OR on July 1, 1999.

Treatment	Weed control				
	Rate	Hairy nightshade	Redroot pigweed	Common lambsquarters	
	product/a		number of plants		
Sonalan	2.5 pt				
+Frontier	12.5 pt	0.25 b'		0 b	0 b
Sonalan	2.5 pt				
+Dual	2.0 pt	0.25 b	0	b	0 b
Eptam	4.0 pt				
+Sonalan	2.5 pt	0.75 b	0.25	b	0.5 b
Eptam	2.5 pt				
+Frontier	1.25 pt	0.25 b	0.25	b	1.5 b
Micro-Tech	5.0 pt				
+Sonalan	2.5 pt	1.75 b		0 b	2.0 b
Eptam	2.5 pt				
+Sonalan	2.5 pt	1.0 b	1.0	b	6.0 b
Micro-Tech	5.0 pt				
+Eptam	2.0 pt	0 b	15	b	19.0 a
Untreated		11 a	15.0	a	22.0 a

'Mean separation with Student-Newman-Keuls (P<0.05).