

2015 Cilantro Weed Control Trial IR4 PR. No. P11092

Richard Smith, Farm Advisor

University of California Cooperative Extension, Monterey County

Methods

The trial was established at the USDA Spence Research Station south of Salinas. Cilantro was seeded in two seedlines on 40-inch wide beds on June 17. Each plot was on 40-inch wide bed by 10 feet long and replicated four times. The soil at the site was Chualar sandy loam (pH – 6.98; CEC – 17.9; OM – 1.76; percent sand, silt and clay – 60, 24 and 16). All materials were applied post plant preemergence June 17 in the morning (air temperature 65 F; wind < 1 mph). Material were applied with a CO₂ pressurized backpack sprayer at 30 psi and using two passes a one tip wand with an 8008EVS nozzle applying the equivalent of 83 GPA. Irrigation was started on June 18 with solid set sprinklers. Weeds present at the site included redroot pigweed, common groundsel and annual sow thistle. Other weeds consisted of sand spurry, hairy nightshade and knot weed. Weeds were counted on July in a 3 ft² area in each plot. After counting, weeds were removed to maintain the plot weed free through the harvest on July 27. See table 1 for treatments and rates.

Results

There was good weed pressure at this site. Prometryn was the standard material used at a typical rate for the area (2.0 pints/A). It provided complete weed control on July 10 (22 days after first irrigation) and was slightly phytotoxic to the cilantro on July 10 (Table 1). There was significantly less yield in the prometryn treatment than the untreated control. Clomazone was applied at 0.25 and 0.50 lb a.i./A. Both rates provided complete weed control on July 10. Phytotoxicity ratings were highly significant for both rates on July 10, and were worse on with the higher rate. Both rates had significantly lower yield than the untreated control and the prometryn treatment. Phytotoxicity symptoms were reduced at harvest.

Table 1. Weed counts (3 ft²) and phytotoxicity on July 10 and yield evaluation and phytotoxicity on July 27.

Materials	a.i. lbs/A	July 10							July 27	
		pig weed	common purslane	common groundsel	sow thistle	other weeds	total weeds	phyto- toxicity ¹	yield lbs/A	phyto- toxicity ¹
Untreated	---	9.0	1.3	5.8	9.5	0.5	26.0	0.0	2008.7	0.0
prometryn	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1790.4	0.0
Clomazone	0.25	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1310.0	1.3
Clomazone	0.50	0.0	0.0	0.0	0.0	0.0	0.0	6.2	1135.4	1.5
P>treat.	---	0.0304	0.0108	0.0135	0.0017	0.4363	<0.0001	<0.0001	0.0408	0.0126
LSD _{0.05}	---	2.1	0.2	1.2	1.4	ns	1.2	0.2	87.3	0.3

1 – scale: 0 = no crop damage to 10 = crop dead.