

2012 Cilantro Control Trial

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Methods: The trial was established in Hollister with a cooperating PCA/grower in a commercial cilantro production field. The field was seeded and the preemergence treatments were applied on August 6, 2012 and the first germination water was applied on August 7. The postemergence treatment was applied at the first true leaf stage on August 27. All applications were made with four passes of a one-nozzle wand with an 8008E nozzle at 30 psi applying 72 GPA. The trial was arranged in a randomized complete block design with three replications. Each plot was one 80-inch bed wide by 10 feet long. The soil at the site was Sorrento silty clay loam. Weed count areas are shown in tables. Yield evaluation was conducted of an area 1.0 meter square.

Results: There was good weed pressure at this site with redroot pigweed, purslane, hairy nightshade and lambsquarters being dominant. The trial evaluated Caparol, Lorox and GWN 9994 applied preemergence and Caparol and Lorox applied at the first true leaf stage. The preemergence applications were evaluated on August 22. Caparol and Lorox at 1.5 lbs a.i./A both provided complete weed control on this date (Table 1). Lorox at 0.75 lbs/A had 4.7 weeds/3 ft² compared to the untreated control which had 44.7 weeds/3 ft². GWN 9994 (a low VOC formulation of bensulide – Prefar) controlled pigweed, purslane and lambsquarters, but was weak on hairy nightshade and had a total of 22.0 weeds/3 ft². The pre and postemergence weed control treatments were evaluated on September 4. The 1.5 lb a.i./A preemergence applications of both Caparol and Lorox continued to provide good weed control (Table 2) as did the postemergence applications of these materials. GWN 9994 continued to be weak on hairy nightshade. Weeding time basically followed the trend for the number of weeds with higher numbers of weeds needing more time per acre to weed. The untreated control required 238.3 hours/A to weed compared to a low of 6.4 and 8.8 hours/A for the postemergence Caparol and Lorox applications, respectively. The postemergence applications of both Caparol and Lorox had greater phytotoxicity. Lorox had less phytotoxicity than Caparol. These levels of phytotoxicity were reflected in the yield evaluation with the lowest yield occurred in the postemergence applications of Caparol, followed by Lorox. The untreated also had low yield due to heavy weed pressure. The highest yields were in all of the preemergence Caparol and Lorox treatments.

September 4, 2012



Untreated



Caparol preemergence 1.5 lb a.i./A



Caparol post emergence 1.0 lb a.i./A



Lorox preemergence 0.75 lb a.i./A



Lorox preemergence 1.5 lb a.i./A



Lorox post emergence 0.5 lb a.i./A



GWN 9994 preemergence 4.0 lb a.i./A

September 11, 2012



Caparol post 1.0 lb ai/A
foreground 1.5 pre in back

Untreated control

Table 1. Weed counts (3 ft²) and phytotoxicity rating of preemergence treatments¹ on August 22

Material	Lbs a.i./A	Material/A	Application	Phyto-toxicity ²	Pig weed	Purslane	Night-shade	Lambs-quarters	Total Weeds
Caparol 4L	1.5	3 pints	Preemergence	0.0	0.0	0.0	0.0	0.0	0.0
Caparol 4L	1.0	2 pints	Postemergence	---	---	---	---	---	---
Lorox	0.75	1.5 lbs	Preemergence	0.0	0.3	0.0	4.3	0.0	4.7
Lorox	1.5	3.0 lbs	Preemergence	0.3	0.0	0.0	0.0	0.0	0.0
Lorox	0.5	1.0 lbs	Postemergence	---	---	---	---	---	---
GWN 9994 ³	4.0	4 qt	Preemergence	0.0	0.7	0.0	21.3	0.0	22.0
Untreated	---	---	---	0.0	9.3	4.0	30.0	1.3	44.7
Pr>trt				0.4609	0.005	0.0007	0.0124	0.1486	0.0034
LSD (0.05)				NS	4.5	1.5	17.5	NS	19.9

1 – post emergence treatments had not yet been applied and were not evaluated on this date; 2 – scale: 0=no crop damage to 10=crop dead; 3 – low VOC formulation of bensulide (Prefar)

Table 2. Weed counts (3 ft²), phytotoxicity rating and time of weeding evaluations of all treatments on September 4 and yield on September 11

Material	Lbs a.i./A	Application	Phyto-toxicity	Pig weed	Purslane	Night-shade	Lambs-quarters	Total Weeds	Weed time Hrs/A	Yield Lbs/A
Caparol 4L	1.5	Preemergence	0.0	0.0	0.0	0.0	0.0	0.0	9.4	9,022.4
Caparol 4L	1.0	Postemergence	3.3	0.0	0.3	0.0	0.0	0.3	6.4	2,651.0
Lorox	0.75	Preemergence	0.0	1.0	0.3	5.3	0.0	6.7	26.6	10,604.2
Lorox	1.5	Preemergence	0.0	0.0	0.0	0.7	0.3	1.0	10.9	9,846.7
Lorox	0.5	Postemergence	1.3	0.0	0.0	0.0	0.0	0.0	8.8	5,101.6
GWN 9994	4.0	Preemergence	0.0	0.7	0.0	14.0	0.0	14.7	98.1	8,131.3
Untreated	---	---	0.0	9.0	3.3	30.3	1.3	44.0	238.3	6,883.8
Pr>trt			<0.0001	0.0013	<0.0001	<0.0001	0.0019	<0.0001	<0.0001	<0.0001
LSD (0.05)			0.5	3.6	1.0	8.3	0.6	10.1	44.0	2118.7