

2007 Spinach Weed Control Trials

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Methods: Trial No 1: The trial was established in cooperation with Chris Drew and Luke Pawlak off Espinosa Road between Salinas and Castroville. The trial was planted on August 21 with the variety Pelican. Treatments were applied on August 22 and were sprinkler irrigated on August 23. The weather was foggy in the morning and sunny and in the 70's the afternoon of August 22. Each plot was one 80-inch bed wide by 10 feet long and replicated 3 times in a randomized complete block design. Materials were applied with a CO2 backpack sprayer using a one wand nozzle with an 8008E tip at 30 psi. Four passes with the wand applied the equivalent of 72 GPA of water. The soil type was Croply silty clay.

Trial No 2: The trial was established in cooperation with Mike Kennedy and Shawn Kuchta south of Gilroy. The trial was planted on September 6. Treatments were applied on September 6 and were sprinkler irrigated on September 7. Each plot was one 80-inch bed wide by 10 feet long and replicated 3 times in a randomized complete block design. Materials were applied with a CO2 backpack sprayer using a one wand nozzle with an 8008E tip at 30 psi. Four passes with the wand applied the equivalent of 72 GPA of water. The soil type was Pacheco Silt Loam.

Results: Trial No. 1: The trial site had low weed populations and no weed evaluations were conducted. Yield evaluations showed that at this site Dual Magnum at 0.5 and 1.0 pint/A had significantly lower yield than the untreated control. RoNeet at 1.25 pint and Lorox at 0.1 to 0.4 lb/A yielded equivalently to the untreated control (10.92 T/A).

Trial No. 2: Shepherd's purse was the dominant weed at this site and provided an excellent opportunity to evaluate the weed control treatments. Dual Magnum at 1.0 pint/A provided the best weed control in the trial. But even Dual Magnum at 0.3 pint/A provided 78 and 72% control of shepherd's purse on September 21 and 26, respectively. RoNeet at 1.25 pint provided 81% control of shepherds purse on September 26. Lorox provided stepwise weed control of shepherd's purse from 0.1 to 0.4 lb/A, and provided 60% control of shepherd's purse on September 26. Weeding time in this field were high with the untreated control requiring 92.0 hours/A to weed. The lowest weeding time was with Dual Magnum at 1.0 pint/A at 14.6 hours/A to weed. The standard RoNeet treatment required 24.7 hours/A to weed and Dual Magnum at 0.5 pint/A required 22.3 hours/A. Dual Magnum at 1.0 pint/A had significantly reduced yield (5.82 T/A(versus the untreated (6.57) and standard RoNeet treatment (6.79 T/A).

Table 1. Trial No. 1: Yield per plot on September 17

Treatment	Lbs a.i./A	Material/A	Fresh Wt. Tons/A	Dry Wt. Tons/A	Percent Moisture
RoNeet 6E	0.93	1.25 pints	10.63	0.632	0.94
RoNeet 6E + Dual Magnum 7.63	0.93 0.48	1.25 pints 0.50 pint	8.30	0.525	0.93
Dual Magnum 7.63	0.48	0.50 pint	8.55	0.524	0.93
Dual Magnum 7.63	0.96	1.00 pint	6.28	0.407	0.93
Lorox 50	0.05	0.1 lbs	12.18	0.666	0.94
Lorox 50	0.10	0.2 lbs	10.82	0.631	0.94
Lorox 50	0.15	0.3 lbs	10.60	0.593	0.94
Lorox 50	0.20	0.4 lbs	10.56	0.612	0.94
Untreated	----	---	10.92	0.637	0.94
LSD (0.05)			1.60	0.081	n.s.

Table 2. Trial No. 2. Weed counts per 4 ft² on two dates, weeding time on September 26 and yield evaluation on October 4.

Treatment	Lbs a.i./A	Material/A	Shepherd's Purse		Henbit		Total Weeds		Phyto		Weeding Time (hrs/A)	Fresh Wt. Tons/A
			9/21	9/26	9/21	9/26	9/21	9/26	9/21	9/26		
RoNeet 6E	0.93	1.25 pints	8.3	6.7	1.7	0.4	10.7	7.1	0.0	0.3	24.7	6.79
Dual Magnum 7.63	0.28	0.30 pint	10.0	9.8	2.0	2.2	12.3	12.0	0.0	0.3	30.8	6.51
Dual Magnum 7.63	0.48	0.50 pint	7.3	2.7	1.0	1.8	8.7	4.4	0.5	0.7	22.3	6.11
Dual Magnum 7.63	0.96	1.00 pint	1.0	0.4	0.0	0.4	1.0	0.9	1.5	2.7	14.6	5.82
Lorox 50	0.05	0.1 lbs	40.7	37.3	5.0	6.2	45.7	43.6	0.0	0.0	94.3	6.65
Lorox 50	0.10	0.2 lbs	38.0	32.9	8.7	4.4	46.7	37.3	0.0	0.0	77.3	6.91
Lorox 50	0.15	0.3 lbs	19.0	24.9	4.0	4.0	23.3	28.9	0.0	0.0	67.4	7.14
Lorox 50	0.20	0.4 lbs	12.3	14.2	3.7	4.0	16.0	18.2	0.2	0.3	41.6	7.09
Untreated	----	----	47.3	35.6	7.3	5.8	54.7	41.3	0.0	0.0	92.0	6.57
LSD (0.05)			10.6	9.8	4.0	4.5	11.3	9.6	0.6	2.4	11.3	0.89