

2016 Leek Weed Control Study

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Methods: *Trial No. 1:* The trial was conducted in a commercial production field near Chualar, CA. Each plot was one 40-inch bed wide by 7 feet long and replicated three times in a randomized complete block design. The trial was transplanted on April 6 and the pre transplant applications were made to shaped beds on April 5 (temperature was 70 °F and wind was 1-2 mph from west); sprinkler irrigation water was applied immediately post transplant. *Trial No. 2:* The trial was on a later planting and the post emergence treatments were made on May 5. Irrigation water was applied 2 days later. There were low numbers of weeds at this site and we were not able to conduct weed evaluations. **Both trials:** All applications were made with a CO₂ backpack sprayer with two passes of a one-nozzle wand with an 8008E tip at 30 psi applying the equivalent of 72 gallons per acre. The soil at the site was Salinas loam. The trial was evaluated for weeds by counting the number of each species per 14 ft². Phytotoxicity (Phyto) was evaluated according to the following scale: 0 = no crop toxicity to 10 = crop dead.

Results: *Trial No. 1:* There was light weed pressure in this trial and there was no statistical differences in weed control among the preemergence treatments. There was only slight evidence of phytotoxicity on the higher rates of Zidua the May 10 and June 13 evaluation dates (Table 1). There were no differences in yield among the treatments. The high rate of Dacthal evaluations did not exhibit any phytotoxicity or have lower yields. *Trial No. 2:* There were few weeds in this trial and we were not able to conduct weed evaluations in this post emergence evaluation. There was significant phytotoxicity in the Goal Tender treatment on May 10, but it was much less by June 13 (Table 2). There were not differences in the yield of the various treatments.



Damage from post emergence application of Goal Tender



Goal Tender damage later in the growing season



70.6 gram/A rate of Zidua applied post emergence

Table 1. Trial No. 1. Preemergent trial. Phytotoxicity, weed and harvest evaluations.

| Treatment | Material/A | a.i./A | April 19 | May 10 | | | June 13 | July 26 | |
|---------------------------------|------------|---------|----------|--------|---------------------|----------------|-------------------|---------|----------------|
| | | | Phyto | Phyto | Shepherd's purse | Sow thistle | Burning nettle | Phyto | Harvest T/A |
| Untreated | ---- | ---- | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 39.97 | |
| Dacthal 6F | 1.33 gals | 8.0 lb | 0.0 | 0.0 | 0.3 | 0.0 | 0.3 | 35.35 | |
| Goal Tender 4F | 8.0 oz | 0.25 lb | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 39.41 | |
| Prowl H2O | 33.7 oz | 1.00 lb | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 36.75 | |
| Zidua | 17.6 gram | 15.0 gr | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 37.26 | |
| Zidua | 35.3 gram | 30.0 gr | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 38.57 | |
| Zidua | 70.6 gram | 60.0 gr | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 39.85 | |
| Pr>F | | | ns | 0.1702 | 0.6084 | 0.4682 | 0.4682 | 0.9161 | |
| LSD _{0.05} | | | ns | ns | ns | ns | ns | ns | |
| <i>Observational Treatments</i> | | | | | | | | | |
| Dacthal 6F | 2.66 gals | 16.0 lb | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.90 | |
| Dacthal 6F | 5.32 gals | 32.0 lb | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.31 | |

Table 2. Trial No. 2. Post emergent trial. Phytotoxicity and harvest evaluations.

| Treatment | Material/A | a.i./A | May 10 | June 13 | July 26 |
|----------------|------------|---------|--------|---------|----------------|
| | | | Phyto | Phyto | Harvest T/A |
| Untreated | ---- | ---- | 0.0 | 0.0 | 55.35 |
| Dacthal 6F | 1.33 gals | 8.0 lb | 0.0 | 0.0 | 48.90 |
| Goal Tender 4F | 8.0 oz | 0.25 lb | 4.0 | 1.3 | 48.43 |
| Prowl H2O | 33.7 oz | 1.00 lb | 0.0 | 0.7 | 53.02 |
| Zidua | 17.6 gr | 15.0 gr | 0.0 | 0.3 | 51.23 |
| Zidua | 35.3 gr | 30.0 gr | 0.3 | 0.0 | 54.77 |
| Zidua | 70.6 gr | 60.0 gr | 0.7 | 0.2 | 52.83 |

| | | | | | |
|---------------------|--|--|---------|--------|--------|
| Pr>F | | | <0.0001 | 0.1119 | 0.1921 |
| LSD _{0.05} | | | 0.5 | ns | ns |