

2018 Evaluation of Grounded from Improving the Efficacy of Kerb in Lettuce

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Methods: Two trials were evaluating the efficacy of Grounded (an adjuvant designed to keep soil applied herbicides from moving too deep into the soil) for improving the efficacy of Kerb in providing weed control in lettuce production. **Trial No. 1:** Conducted with a cooperating grower near Soledad on Metz fine sandy loam soil. The trial was planted on August 10. The treated area was 12 80-inch beds planted to Romaine lettuce; Kerb was applied at 3.5 pint/A and Grounded at 1% v/v. Weeds were evaluated on September 7 by counting the weeds following cultivation in the seedline (number of weeds 1 meter long in the 6 seedlines) in 20 locations in the 12 bed strip and in an adjacent 12 bed strip that had been treated with Kerb only. **Trial No. 2:** Conducted at the Spence USDA Research Station with Chualar loam soil. The trial was planted on August 23 and herbicide treatments were applied the same day. The first water was applied on August 24. Each plot was 2 40-inch beds wide by 20 feet long and replicated four times in a randomized complete block design. The materials were applied with a CO2 backpack sprayer applying the equivalent of 36 gallons per acre of water (see Table below for rates of materials). Weeds were rated on September 25 by counting the number of weeds in 4 1-foot² quadrats per plot.

Results: **Trial No. 1:** There is a trend indicating fewer weeds in the Grounded treatment (Table 1) **Trial No. 2:** All the Kerb treatments have fewer weeds than the untreated control (Table 2). There are fewer weeds with Kerb at 3.0 pints vs 2.0 pints/A. There are no differences between Kerb with and without Grounded in this trial.

Table 1. Trial No. 1. Number of weeds per 5.5 ft² on September 7

Treatments	Purslane	Shepherd's purse	Chickweed	Total weeds
Kerb 3.5 pints	5.7	1.3	0.2	7.0
Kerb 3.5 pints +Grounded 1% v/v	5.2	0.6	0.0	5.7

Table 2. Trial No. 2. Number of weeds per 4 ft² on September 25

Treatments	Shepherd's purse	Purslane	Pineapple weed	Sow Thistle	Groundsel	Total weeds
Untreated	20.3	4.8	0.0	3.3	1.8	30.0
Kerb 2.0 pints	12.0	1.8	0.3	1.8	1.8	17.5
Kerb 3.0 pints	7.0	0.5	0.5	2.3	0.5	10.8
Kerb 2.0 pints +Grounded 1% v/v	12.5	0.3	0.5	1.8	1.5	16.5
Kerb 3.0 pints +Grounded 1% v/v	9.3	0.3	1.0	2.0	2.3	14.8
P	0.0335	0.0014	0.5452	0.8272	0.2231	0.0127
LSD _{0.05}	8.0	2.0	ns	ns	ns	9.9