

2013 Onion Weed Control Trials

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Methods: Trial No. 1. Trial was conducted in a commercial onion field with a cooperating grower south of King City. Each plot was one 80-inch bed wide by 10 feet long and replicated three times in a randomized complete block design (0.006121 acre; 1600 mls/4 reps). The trial was seeded to the variety 'Comet on April 5 and the post plant preemergent (PPE) applications were made on the same day. Two true leaf applications were made on April 25 and third true leaf application was made on May 10. The soil at the site Metz complex with loamy sand surface texture. The trial was evaluated for weeds, phytotoxicity and weed time. No yield evaluations were made.

Trial No. 2. Trial was conducted in a commercial onion field with a cooperating grower in Greenfield. Each plot was one 40-inch bed wide by 15 feet long and replicated four times in a randomized complete block design (0.005739 acre; 1500 mls/5 reps). The trial was seeded to the variety 'Tamara on March 7. No preplant herbicide was applied and weeds were well developed at the time of application. All treatments were applied at the two true leaf stage on April 5. 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 70 gallons per acre. The soil at the site was Elder loam. See tables for treatments, rates and evaluations.

Results: Trial No. 1. This trial 1 was designed to mainly test the safety of Zeus as a preemergent herbicide on onions. In this trial it looked safe up to 4.0 ounces/A. Purslane was the main weed at this site. The May 17 evaluation date measured the effect of the preemergent and 2 true leaf herbicide applications. None of the herbicides significantly reduced the numbers of purslane on the May 17 evaluation date and all materials were safe on the onions (Table 1). On the May 31 evaluation date the ET treatment was the weakest of the herbicide treatments (Table 2). **Trial No. 2.** This trial evaluated the ability of materials to salvage a field when the preemergent material was not applied and the weeds were big and growing fast. By far the most effective material was 7-7-0-7 and 7-7-0-7 followed by Goal Tender (Table 3); however, these materials were much more injurious to the onions. 7-7-0-7 followed by Goal Tender had the lowest weeding time. 7-7-0-7 by itself, Buctril 2EC and Goal Tender had comparable weed control times 7.6 – 8.3 hours/A. ET was very weak and had weeding time comparable with the untreated control.

Table 1. Trial No. 1. Weed evaluation and phytotoxicity evaluation on May 17

Treatment	Material/A	Timing	Lovegrass	Lambs-quarter	Purslane	Total weeds	Phyto ¹
Dacthal 6F Fb Goal Tender Fb Buctril 2EC	1.33 gals 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	0.7	1.3	9.0	13.3	0.0
Zeus 4 Fb Goal Tender Fb Buctril 2EC	1.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	1.7	0.7	11.7	15.7	0.0
Zeus 4 Fb Goal Tender Fb Buctril 2EC	2.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	2.7	1.0	10.7	16.3	0.0
Zeus 4 Fb Goal Tender Fb Buctril 2EC	3.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	1.7	1.0	9.3	14.3	0.7
Zeus 4 Fb Goal Tender Fb Buctril 2EC	4.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	1.3	0.3	10.7	13.0	0.7
Dacthal 6F Fb ET Fb Buctril 2EC	1.33 gals 2.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	1.7	1.0	13.0	17.3	0.0
Nortron Fb Goal Tender Fb Buctril 2EC	16.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	2.7	2.0	12.7	19.7	0.7
Dacthal 6F 7-7-0-7 Fb Goal Tender Fb Outlook 6.0	1.33 gals 72 gals 6.0 oz 14.0 oz	Pre Post 2 t. leaf Post 2 t. leaf Post 2 t. leaf	1.0	0.3	16.0	19.0	0.0
Untreated	----	----	2.7	2.0	13.7	20.3	0.0

1 – Scale: 0 = no crop damage to 10 = crop killed

Table 2. Trial No. 1. Weed evaluation and phytotoxicity evaluation on May 31

Treatment	Material/A	Timing	Lovegrass	Lambs-quarter	Purslane	Total weeds	Phyto ¹	Weed time hr/A
Dacthal 6F Fb Goal Tender Fb Buctril 2EC	1.33 gals 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	4.7	0.0	0.0	4.7	2.0	9.7
Zeus 4 Fb Goal Tender Fb Buctril 2EC	1.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	2.3	0.3	0.0	3.3	1.7	5.0
Zeus 4 Fb Goal Tender Fb Buctril 2EC	2.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	4.0	0.0	0.0	4.0	1.7	6.5
Zeus 4 Fb Goal Tender Fb Buctril 2EC	3.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	4.7	0.0	0.0	5.0	1.3	7.7
Zeus 4 Fb Goal Tender Fb Buctril 2EC	4.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	3.3	0.7	0.0	4.0	2.0	7.7
Dacthal 6F Fb ET Fb Buctril 2EC	1.33 gals 2.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	5.3	3.7	0.0	10.3	1.7	14.5
Nortron Fb Goal Tender Fb Buctril 2EC	16.0 fl oz 6.0 fl oz 16.0 fl oz	Pre Post 2 t. leaf Post 3 t. leaf	4.3	0.0	0.0	4.3	1.7	9.6
Dacthal 6F 7-7-0-7 Fb Goal Tender Fb Outlook 6.0	1.33 gals 72 gals 6.0 oz 14.0 oz	Pre Post 2 t. leaf Post 2 t. leaf Post 2 t. leaf	1.3	0.0	0.0	1.3	4.3	2.8
Untreated	----	----	4.3	3.0	10.7	20.0	0.0	57.2

1 – Scale: 0 = no crop damage to 10 = crop killed

Table 3. Trial No. 2. Weed evaluation on April 9 and weed removal time and number of weeds removed on April 18

Treatment	Material/A	Lambs- quarter	Groundsel	Sow Thistle	Phyto ¹	Number of weeds	Weed time hrs/acre
		Weed rating ²					
Goal Tender Buctril 2EC	6.0 fl oz 16.0 fl oz	4.5	3.5	5.0	1.3	28.0	7.9
Goal Tender	6.0 fl oz	2.8	2.0	5.0	0.8	85.8	15.4
Buctril 2EC	16.0 fl oz	2.8	5.8	5.5	0.8	44.3	8.3
ET	1.0 fl oz	2.5	2.8	3.7	1.8	96.3	17.8
ET	2.0 fl oz	3.0	3.5	4.3	1.5	104.3	21.3
Zeus 4	2.0 fl oz	6.3	2.7	3.5	1.0	98.0	16.7
7-7-0-7	70 GPA	7.8	8.0	9.0	3.5	41.8	7.6
7-7-0-7 Fb Goal Tender Fb Outlook 6.0	70 GPA 6.0 oz 14.0 oz	9.0	9.3	10.0	3.7	17.3	3.5
Spin-Aid	4 pints	2.5	1.5	6.0	1.5	56.5	11.5
Untreated	----	0.0	0.0	0.0	0.0	59.7	21.2

1 – Scale: 0 = no crop damage to 10 = crop killed

2 – Scale: 0 = no weed control to 10 = total weed control