

## 2012 Organic and Conventional Contact Herbicides Evaluation

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**Methods:** The trial was conducted at the Hartnell East Campus Research Facility. The trial was conducted during the cool time of the year to evaluate the effectiveness of the materials under cool winter conditions. Weeds were germinated up in a fallow field by sprinkler irrigation and rain in January. The germinated weeds were treated with one application on February 23 when the weeds were at the 2-4 true leaf stage. Plots were 10 feet wide by 15 feet long and replicated four times in a randomized complete block design. Materials were applied to the middle 6 feet of the bed by the length of the bed with four passes of a one wand with one 11005VS air induction nozzle. The material was applied in the equivalent of 54 gallons of water per acre. Weather at the time of application was clear and 74 F, but the day quickly cooled down and there was a low of 43 F that night and there was a trace of precipitation the following day. The following materials were tested: Scythe (pelargonic acid) not organic but included for comparison with Final-San-O which has a similar chemistry; Final-San-O (ammoniated salt of a fatty acid) – organically acceptable; Weed Pharm (20% acetic acid) – organically acceptable; and Shark (carfentrazone) a conventional herbicide included as a standard.

**Results:** Scythe at 6% appeared was more effective on the March 4 evaluation date than Final-San-O at 10% on burning nettle, shepherd's purse, groundsel and malva (Table 1). However, 9% Scythe and 20% Final-San-O were roughly equivalent on March 4. The same comparative trends between these two materials was observed on the March 27 evaluation date. Higher rates of both Scythe and Final-San-O provided improved control. Weed Pharm provided excellent burndown control of weeds present at this site and had little recovery of the weeds except for malva. Both Final-San-O and Weed Pharm are organically certified materials and show good ability to burn back small weeds; more weed recovery was observed with Final-San-O than Weed Pharm.

All photos taken on March 27



Photos 1-3: untreated - nettle, shepherd's purse and groundsel



Photos 4-6: Scythe @9% - burned back nettle, severely burned groundsel and recovering groundsel



Photos 7-9: Final-San-O @ 20% - burned back nettle, and severely burned back groundsel



Photos 10-12: Weed Pharm @100% - severely burned back nettle

Table 1. Weed control ratings<sup>1</sup> on March 4, 2012

Treatment	Rate	Burning Nettle		Shepherd's Purse		Groundsel		Malva	
		March 4	March 27	March 4	March 27	March 4	March 27	March 4	March 27
Untreated	----	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scythe	6% v/v	5.3	2.5	3.7	4.3	6.0	7.0	6.8	5.3
Scythe	9% v/v	7.8	5.5	7.3	6.5	9.3	9.1	9.8	7.0
Final-San-O	10% v/v	3.5	2.3	1.8	2.0	2.3	4.0	3.0	4.0
Final-San-O	20% v/v	7.3	3.8	5.7	5.5	8.0	7.8	8.3	5.0
Weed Pharm	100% v/v	8.6	8.5	7.0	7.7	7.5	7.0	9.3	6.0
Shark + NIS <sup>2</sup>	1.0 Oz/A	9.8	9.0	9.4	8.0	8.9	7.8	9.9	8.7
	Pr>treat	0.0001	0.0001	0.0001	na	0.0001	0.0001	0.0001	na
	LSD (0.05)	2.3	0.7	2.4	na	2.8	1.7	1.3	na

1 – Scale: 0 = no weed control to 10 = complete weed control; 2 – DynAmic NIS @ 0.25%