Comparison of GameOn vs. SurePower for Efficacy and Tolerance

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Introduction

The objective of this trial was to evaluate the efficacy and turfgrass tolerance of GameOn and SurePower in Iowa.

Materials and Methods

Research was conducted at the Iowa State University Horticulture Research Station, Ames, Iowa, on a native soil tall fescue lawn type turf stand. Experimental units were 5 ft by 10 ft with a 1 ft border. Granular treatments were applied with a drop spreader. Liquid treatments were applied using a CO_2-pressurized backpack sprayer with TeeJet 8004XR nozzles calibrated to apply one gallon water carrier/1,000 ft^2. Treatments were arranged as a randomized complete block design with four replications. Turfgrass quality ratings were taken at 4 and 8 weeks after treatment (WAT), visual weed injury ratings were collected at 7, 14, and 21 days after treatment (DAT), visual percent weed cover were rated at 0, 4, 6, 8, and 12 WAT, and visual weed control was rated at 0, 4, 6, 8, and 12 WAT. Treatments were applied April 26 and plots were watered April 27 with 0.25 in. of irrigation.

Results and Discussion

Visual weed injury varied by rating date for both white clover and dandelion (Table 1). The untreated control (UTC) offered no visual weed injury throughout the trial, as expected. After 7 DAT, both rates of SurePower offered greater visual weed injury on both white clover and dandelion weed species than the GameOn at any rate tested. There were no differences in weed injury at 7 DAT between the three rates of GameOn. Both the GameOn at 8 pt/acre (72.5%) and GameOn at 4 pt/acre (72.5%) had lower visual weed injury on dandelions at the 14 DAT rating than the SurePower treatments. White clover had even greater treatment separation at 14 DAT with SurePower 7 pt/acre (80%) having the greatest visual injury, than SurePower at 3.5 pt/acre (75%) and GameOn at 3.5 pt/acre (73.3%), followed by the other two rates of GameOn (<65%). By the 21 DAT all herbicide treatments were statistically similar in visual weed injury at over 87 percent injury. The lower rates of GameOn performed better than the higher rates of GameOn for visual weed injury in this trial.

Visual weed control differed by rating date (Table 2) for all treatments except the untreated control (0% control). At 4 WAT, the two lowest rates of GameOn (3.5 pt/acre; 65% and 4 pt/acre; 66.3%) had lower visual weed control than all other treatments except the UTC. By 6 WAT, a similar trend was present with SurePower at 7 pt/acre having 95 percent visual control, GameOn at 8 pt/acre (93.8%) and SurePower at 3.5 p./acre (91%) all having greater visual weed control than GameOn at 3.5 pt/acre (77.5%) and GameOn at 4 pt./acre (73.5%). At 8 WAT, there were no differences in visual weed control between treatments except the UTC. All treatments saw a decline in visual weed control from the previous rating. At 12 WAT, GameOn at 8 pt/acre

offered (88.8%) greater visual weed control than GameOn at 3.5 pt/acre (63.8%). There were no differences between any other herbicide treatments, and again the trend of less weed control continued. For the overall mean of the study (including the 0 WAT rating) the GameOn at 8 pt/acre offered the greatest visual weed control compared with the lower rates. SurePower treatments were not statistically different from any treatment except the untreated control. Although visual weed injury was lower for the high rate of GameOn in Table 1, it does appear it still achieved greater weed control after 4 WAT (Table 2).

Although the GameOn at 8 pt/acre did not visually show the quick injury the other treatments did, it was very effective in broadleaf weed control. All of the treatments, except the GameOn at 3.5 pt/acre, reduced weed cover from over 50 percent to less than 20 percent (and in many cases less than that). There was a large amount of weed pressure present for these herbicides, and this could have limited some of the effectiveness of the low rate of GameOn in this study. There were never any issues with turfgrass injury during this study. The best performing product was the GameOn at 8 pt/acre, which did not show as great of initial visual weed injury but did have excellent weed control for a longer duration during the study.

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Table 1. Visual weed injury (0-100%) for various rates of GameOn and SurePower herbicides.

		Dandelion				Clover			
Treatment	Rate pt/acre	7 DAT[a]	14 DAT	21 DAT	Mean	7 DAT	14 DAT	21 DAT	Mean
GameOn	3.5	50.0	77.5	87.5	71.7	50.0	73.3	90.0	69.0
GameOn	4.0	47.5	72.5	90.0	70.0	47.5	65.0	87.5	66.7
GameOn	8.0	42.5	72.5	87.5	67.5	42.5	62.5	87.5	64.2
SurePower	3.5	66.3	8.00	87.5	77.9	66.3	75.0	87.5	76.3
SurePower	7.0	6.05	82.5	91.3	79.6	65.0	80.0	87.5	77.5
Untreated control	0	0	0	0	0	0	0	0	0
	LSD (0.05)	8.2	6.9	4.2	5.0	8.2	3.8	3.8	11.6

[a]DAT = days after treatment.

Table 2. Visual weed control (0-100%) for various rates of GameOn and SurePower herbicides.

Treatment	Rate pt/acre	0 WAT[a]	4 WAT	6 WAT	8 WAT	12 WAT	Mean
GameOn	3.5	0	65.0	77.5	63.8	63.8	54.0
GameOn	4.0	0	66.3	73.5	66.3	66.3	54.5
GameOn	8.0	0	80.0	93.8	90.0	88.8	70.5
SurePower	3.5	0	81.3	91.0	78.8	80.0	66.2
SurePower	7.0	0	87.5	95.0	81.3	81.3	69.0
Untreated control	0	0	0	0	0	0	0
	LSD (0.05)	0	13.6	16.1	23.3	22.9	13.8

[a]WAT = weeks after treatment.