

POST EMERGENT GRASSY WEED CONTROL

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Introduction

In a turfgrass stand, the presence of grass species other than what was planted is often deemed undesirable. Whether this is purely from an aesthetic point of view, or because of different management requirements, the turfgrass manager often wishes to selectively kill one species of grass. In Minnesota, Kentucky bluegrass is commonly used for home lawns, parks, athletic fields and for golf course roughs. In recent years, selective grass herbicides (graminicides) have been developed to eliminate annual bluegrass, rough bluegrass, creeping bentgrass, quackgrass and crabgrass from Kentucky bluegrass turf. The goal of this research is to evaluate the safety of mixing graminicides together in order to control multiple grassy weeds in Kentucky bluegrass.

Materials and Methods

Plots are located at the Turfgrass Outreach and Education (TROE) center on the University of Minnesota St. Paul campus. Four graminicides (Drive[®], Certainty[®], Tenacity[®], and Velocity[®]) were used at 0.5, 1.0, and 1.5 times their labeled rates (Table 1) alone and in 2, 3, and 4 way combinations with the other graminicides for a total of forty-five treatments and three untreated controls (Table 2). Applications were made using a CO₂ powered backpack sprayer calibrated to deliver 80 gallons per acre using two TeeJet XR8010 nozzles. Treatments were applied in the summer to actively growing Kentucky bluegrass mowed at 1.5 inches and irrigated to prevent stress. Plots were rated for phytotoxicity until visual symptoms were no longer.

Results and conclusions will be discussed at field day.

Table 1. Graminicide rates.

Graminicide	0.5X	1.0X	1.5X
Drive	0.1835 oz/acre	0.367 oz/acre	0.5505 oz/acre
Certainty	0.375 oz/acre	0.75 oz/acre	1.125 oz/acre
Tenacity	4.0 fl oz/acre	8.0 fl oz/acre	12.0 fl oz/acre
Velocity	1.0 oz/acre	2.0 oz/acre	3.0 oz/acre

Table 2. Graminicide treatments and plot numbers.

Trt #	Rate	Combination	Plot #		
			Rep 1	Rep 2	Rep 3
1	0.5X	Drive,	214	416	707
2	0.5X	Velocity,	106	609	706
3	0.5X	Tenacity,	101	413	716
4	0.5X	Certainty,	305	608	814
5	0.5X	Drive, Velocity,	204	515	816
6	0.5X	Drive, Tenacity,	112	606	903
7	0.5X	Drive, Certainty,	209	404	710
8	0.5X	Tenacity, Velocity,	306	401	906
9	0.5X	Certainty, Velocity,	302	406	709
10	0.5X	Certainty, Tenacity,	107	616	801
11	0.5X	Drive, Tenacity, Velocity,	115	408	809
12	0.5X	Drive, Certainty, Velocity,	111	605	712
13	0.5X	Drive, Certainty, Tenacity,	208	506	907
14	0.5X	Certainty, Tenacity, Velocity,	311	601	715
15	0.5X	Drive, Certainty, Tenacity, Velocity,	213	610	915
16	1.0X	Drive,	215	514	803
17	1.0X	Velocity,	216	501	911
18	1.0X	Tenacity,	103	602	806
19	1.0X	Certainty,	110	615	902
20	1.0X	Drive, Velocity,	207	503	704
21	1.0X	Drive, Tenacity,	201	607	916
22	1.0X	Drive, Certainty,	310	505	811
23	1.0X	Tenacity, Velocity,	301	411	904
24	1.0X	Certainty, Velocity,	211	415	908
25	1.0X	Certainty, Tenacity,	203	613	701
26	1.0X	Drive, Tenacity, Velocity,	206	513	901
27	1.0X	Drive, Certainty, Velocity,	113	405	812
28	1.0X	Drive, Certainty, Tenacity,	303	414	810
29	1.0X	Certainty, Tenacity, Velocity,	210	614	804
30	1.0X	Drive, Certainty, Tenacity, Velocity,	304	409	714
31	1.5X	Drive,	316	403	703
32	1.5X	Velocity,	307	412	711
33	1.5X	Tenacity,	309	611	813
34	1.5X	Certainty,	205	603	713
35	1.5X	Drive, Velocity,	104	507	815
36	1.5X	Drive, Tenacity,	116	504	705
37	1.5X	Drive, Certainty,	212	402	805
38	1.5X	Tenacity, Velocity,	313	410	807
39	1.5X	Certainty, Velocity,	308	502	808
40	1.5X	Certainty, Tenacity,	108	509	905
41	1.5X	Drive, Tenacity, Velocity,	102	612	912
42	1.5X	Drive, Certainty, Velocity,	315	511	909
43	1.5X	Drive, Certainty, Tenacity,	312	510	702
44	1.5X	Certainty, Tenacity, Velocity,	105	508	914
45	1.5X	Drive, Certainty, Tenacity, Velocity,	114	516	910
46		Untreated Control	202	512	913
47		Untreated Control	314	407	802
48		Untreated Control	109	604	708

Table 3. Graminicide trial plot numbering and layout.

901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916
801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816
701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716
601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616
501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516
401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116

South

