

### Summer Stress Syndrome in Annual Bluegrass

This trial was conducted on a *Poa annua* fairway at the Hancock Turfgrass Research Center, E. Lansing, MI. The plot area was mowed at 0.5" and fertility was as listed below with fertilizer applications being made on a 14-day schedule. The study was set up in a randomized complete block design with four replications of each treatment. Plots measured 2' x 4.5' with 1' alleys. Treatments were applied at 34 PSI in a 48 GPA spray volume using a CO<sub>2</sub> backpack sprayer and a single 8002E tee-jet flat fan nozzle. Initial application of treatments 1-13 and 15-25 was on 26 May, treatment 14 on 9 June, treatment 27 on 21 July, and treatment 26 on 27 July. Re-applications were made on intervals as indicated in the table below. Treatments on a 7-day interval were applied 13 times, 14-day interval 7 times, 21-day interval twice, and 28-day interval 4 times. For specific application dates, see Table 2. A ½ # nitrogen 1000 ft<sup>-2</sup> application was made on 30 May with subsequent fertilizer applications of ¼ # nitrogen 1000 ft<sup>-2</sup> on 13 June, 27 June, 11 July, 24 July, and 9 August. Due to the varied fungicide combinations tested in this study, no additional chemical applications were made to control dollar spot but instead, a 2 oz Chipco 26GT treatment was added on 26 July to serve as a control without turf loss from dollar spot. Quality ratings were visually estimated using a 1 to 10 scale, where 1 = poor, 10 = excellent, and 7 = acceptable. Data were analyzed using ANOVA and means separated by LSD (p = 0.05).

Table 2. Mean quality ratings for summer decline in annual bluegrass.

	Treatment Rate/1000ft <sup>2</sup>	Interval (Days)	27-Jun	12-Jul	25-Jul	8-Aug	25-Aug
1	Daconil Ultrex 3.8 oz	14	8.0 <sup>a</sup> b-e	8.0 b-e	8.0 bc	7.5 c-e	6.8 de
2	Aliette Signature 4 oz	14	7.5 d-f	6.0 h-j	6.0 ij	5.5 k-m	6.3 e-g
3	Daconil Ultrex 3.8 oz + Aliette Signature 4 oz	14	9.0 a	8.8 ab	9.0 a	8.5 ab	7.5 bc
4	Daconil Ultrex 1.9 oz	14	7.8 c-f	7.8 c-e	7.3 d-f	7.0 e-g	6.5 d-f
5	Aliette Signature 2 oz	14	7.8 c-f	6.0 h-j	6.5 g-i	5.8 j-l	6.0 fg
6	Daconil Ultrex 1.9 oz + Aliette Signature 2 oz	14	9.0 a	7.8 c-e	7.5 c-e	7.3 d-f	6.8 de
7	Aliette Signature 4 oz + Chipco 26GT 4 fl oz	14	8.8 ab	9.0 a	8.3 b	8.8 a	8.3 a
8	Fore Rainshield 8 oz + Fosphite 8 fl oz	14	8.5 a-c	7.5 d-f	7.0 e-g	6.0 i-k	6.0 fg
9	Fore Rainshield WSP 8 oz + Aliette Sig. 4 oz	14	8.5 a-c	8.0 b-e	7.3 d-f	6.8 f-h	6.3 e-g
10	Daconil Ultrex 3.5 oz + Aliette Signature 4 oz	14	8.1 a-e	8.5 a-c	9.0 a	8.0 bc	6.8 de
11	Fosphite 8 fl oz	14	8.0 b-e	7.3 e-g	7.0 e-g	6.0 i-k	6.3 e-g
12	Heritage 0.4 oz + Daconil Ultrex 3.2 oz + Aliette Signature 4 oz	28 14	9.0 a	8.8 ab	9.0 a	8.8 a	7.8 ab
13	Heritage 0.4 oz + Daconil Ultrex 3.2 oz	28 14	9.0 a	9.0 a	9.0 a	8.0 bc	7.0 cd
14	Macro Sorb 2 oz	14	6.5 g	6.0 h-j	6.5 g-i	5.8 j-l	6.3 e-g
15	WAC79 2 fl oz + Dac Ultrex 3.8 oz	14	8.8 ab	8.8 ab	8.3 b	7.5 c-e	7.0 cd
16	WAC79 3 fl oz + Dac Ultrex 3.8 oz	14	8.0 b-e	8.3 a-d	7.8 b-d	7.5 c-e	6.8 de

17	WAC79 4 fl oz + Dac Ultrex 3.8 oz	14	8.0 b-e	8.3 a-d	7.8 b-d	7.8 cd	7.0 cd
18	WAC79 2 fl oz + Protect T/O 5 oz	14	7.3 e-g	6.3 hi	6.5 g-i	5.5 k-m	6.0 fg
19	WAC79 3 fl oz + Protect T/O 5 oz	14	7.3 e-g	6.3 hi	6.5 g-i	6.0 i-k	6.0 fg
20	WAC79 4 fl oz + Protect T/O 5 oz	14	8.3 a-d	6.5 gh	6.3 h-j	6.3 h-j	6.0 fg
21	WAC79 2 fl oz + 3336 WP 4 oz	14	7.5 d-f	6.0 h-j	7.0 e-g	6.0 i-k	5.8 g
22	WAC79 3 fl oz + 3336 WP 4 oz	14	7.6 c-f	6.8 f-h	7.0 e-g	6.5 g-i	6.3 e-g
23	WAC79 4 fl oz + 3336 WP 4 oz	14	8.0 b-e	6.3 hi	6.8 f-h	6.0 i-k	5.8 g
24	MKP 5# / acre	7	7.0 fg	5.5 ij	6.3 h-j	5.0 m	6.5 d-f
25	Daconil Ultrex 1.5 oz + MKP 5# / acre	7	8.8 ab	9.0 a	8.0 bc	7.8 cd	8.0 ab
26	Chipco 26GT 2 oz (Control) <sup>b</sup>	21	NA	6.8 f-h	6.5 g-i	7.0 e-g	6.3 e-g
27	MacroSorb 2 oz + Daconil Ultrex 3.8 oz	14	NA	6.0 h-j	6.8 f-h	7.0 e-g	7.0 cd
28	Untreated Control	--	8.0 b-e	5.3 j	5.8 j	5.3 lm	6.0 fg

<sup>a</sup>Treatment means followed by the same letter do not significantly differ (LSD,  $p = 0.05$ ).

<sup>b</sup>Chipco 26GT applied on 26 July and was added as a new treatment at that time.