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^e 28-day interval treatments were applied on 6/7, 7/3, and 7/30.

^f Ammonium sulfate fertilizer applied at 0.25#N/1000 ft² with each treatment application.

^g Treatment did not receive supplemental fertility.

^h Treatment applied on 6/10 and 7/23.

ⁱ Mid-July application on 7/16 was omitted.

^j Applied on 6/7 and 8/15 only.

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". 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 CO₂ backpack sprayer and a single 8002E TeeJet flat fan nozzle. Initial treatment applications were made on 7 June unless otherwise indicated in Table 7. Re-applications were made on intervals as indicated below with subsequent applications for 14 day intervals on 6/18, 7/3, 7/16, 7/30, and 8/15, for 21 day intervals on 8/16, for 28 day intervals on 7/3 and 7/30, and for 6 week intervals on 7/23. Fertility was maintained at ¼# actual N/1000 ft²/ month using 18-3-12 on all treatments, except those listed in Table 7, with 1/8# N/1000 ft² applications being made on 5/23, 6/5, 6/19, 7/3, 7/31, and 8/15. Due to varied fungicide combinations tested in this study, no additional chemical applications were made to control dollar spot. Quality ratings were visually estimated using a 1 to 10 scale, where 10 = excellent, and 7 = acceptable. Data were analyzed using ANOVA and means separated by LSD (p=0.05).

Turf quality varied during this trial for many treatments where good quality was observed on one rating, a decline in quality on the next, and then recovery following that. As the study progressed, dollar spot became severe on many treatments, hence, an overall decline in turf quality for many treatments can be seen as noted by the poorer quality ratings in mid August. The Signature (April 19 application) with Signature + Chipco 26GT treatment provided good turf quality that was statistically significant compared to the control for the entire duration of the study. All of the Signature combination treatments performed well in August with some reaching peak performance in July. The Syngenta Program treatment exhibited phytotoxicity early on in the study, and the turf was slow to recover.

Table 7. Mean quality ratings for summer decline in annual bluegrass 2002.
Location: Hancock Turf Research Center, E. Lansing, MI.
Rating Scale: 1-10 scale, where 10 = excellent and 7 = acceptable.

Treatment and Rate/1000 sq ft	Interval (Days)	Mean ^b 18-Jun	Mean 11-Jul	Mean 15-Jul	Mean 5-Aug	Mean 15-Aug	Mean 28-Aug
Chipco Signature 8 oz +	April 19 +						
Chipco Signature 4 oz + Chipco 26GT 3 fl oz	14 ^d	7.0 A ^c	7.25 A	7.5 A	6.0 AB	6.0 A	7.5 A
Chipco Signature 4 oz + Triton 0.5 fl oz	14 ^d	6.5 AB	7.0 BA	7.0 A	6.8 A	6.0 A	6.8 AB
Chipco Signature 4 oz + Triton 1 fl oz, then	14 (2 apps)						
Chipco Signature 4 oz + Chipco 26GT 3 fl oz, then	14 (2 apps)						
Chipco Signature 4 oz + Daconil Ultrex 3.8 oz	14 (2 apps)	6.0 BC	7.3 A	7.0 A	6.0 AB	5.5 A	6.8 AB
Chipco Signature 4 oz + Daconil Ultrex 3.2 oz	14 ^d	6.3 BC	6.8 A-C	7.0 A	6.3 AB	5.8 A	6.8 AB
Banner Maxx 0.5 fl oz + Heritage 0.2 oz + Primo Maxx 0.25 fl oz ^f	14 ^h	5.8 C	6.0 C-E	6.0 B	5.5 ⁱ B	5.5 A	6.8 AB
Chipco Signature 4 oz +	28 ^e						
Chipco 26GT 3 fl oz	14 ^d	6.3 BC	6.8 A-C	6.0 B	6.8 A	5.8 A	6.5 AB
Spectro 4 oz + Alliance 3 fl oz	14 ^d	6.0 BC	5.8 D-F	6.0 B	6.0 AB	4.5 B	6.0 B
Daconil Ultrex 3.2 oz.	14 ^d	6.0 BC	6.0 C-E	6.0 B	5.7 B	4.0 B	5.7 BC
Endorse 4 oz + Alliance 3 fl oz	14 ^d	6.3 BC	6.0 C-E	5.0 C-E	4.5 C	2.0 D	4.8 CD
Primo Maxx 0.25 fl oz + Banner Maxx 1.0 fl oz + Daconil Ultrex 1.8 oz ^f	7-Jun						
Primo Maxx 0.25 fl oz + Subdue Maxx 0.5 fl oz + Daconil Ultrex 1.8 oz ^f	1-Jul						
Primo Maxx 0.25 fl oz + Banner Maxx 1.0 fl oz + Heritage 0.2 oz + Subdue Maxx 0.5 fl oz ^f	21-Jul						
Primo Maxx 0.25 fl oz + Banner Maxx 1.0 fl oz + Heritage 0.2 oz + Subdue Maxx 0.5 oz ^f	14-Aug						
Primo Maxx 0.25 fl oz + Banner Maxx 1.0 fl oz + Daconil Ultrex 1.8 oz ^f	7-Sep	6.0 BC	6.3 B-D	5.8 BC	5.8 B	4.0 B	4.8 CD
24 fl oz Vital Reaction "A" + 24 fl oz Vital Reaction "B" in ^{g, a}	6 weeks ^h	6.3 BC	5.0 F	4.3 E	3.8 CD	2.5 D	4.8 CD
Control	--	6.0 BC	6.0 C-E	5.5 BC	4.3 C	2.5 D	4.5 DE
0.5 gal Vital Reaction "A" + 0.5 gal Vital Reaction "B" in 4 ^{g, a}	6 weeks ^h	7.0 A	5.3 EF	4.5 DE	3.8 CD	3.3 C	4.5 DE
Banner Maxx 0.5 fl oz + Heritage 0.2 oz + Primo Maxx 0.25 fl oz ^f	21 ^j	6.0 BC	5.8 D-F	5.3 B-D	4.3 C	2.3 D	4.3 DE
1 quart Vital Reaction "A" + 1 quart Vital Reaction "B" ^{g, a}	6 weeks ^h	6.0 BC	5.0 F	4.3 E	3.0 D	2.0 D	4.0 DE
1 pint Vital Reaction "A" + 1 pint Vital Reaction "B" ^{g, a}	6 weeks ^h	5.8 C	5.0 F	4.3 E	3.0 D	2.3 D	3.5 E

^a Treatment applied in 4 gal / 1000 ft² spray volume.

^b Mean of 4 replicate plots.

^c Treatments means followed by the same letter do not significantly differ (LSD, p=0.05).

^d 14-day interval treatments applied on 6/7, 6/18, 7/3, 7/16 (7/19 for treatment 4B), 7/30, and 8/15.

^e 28-day interval treatments were applied on 6/7, 7/3, and 7/30.

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