Spectro 4 oz + Alude 5.5 fl oz	6/30	]		[	. [
Endorse 4 oz + Protect 6 oz + Alude 5.5 fl oz	7/15				
3336 4 oz + Protect 6 oz + Alude 5.5 fl oz	7/28				
Endorse 4 oz + Protect 6 oz + Alude 5.5 fl oz	8/13				
Gary's Green 6 fl oz + Ultra Plex 6 fl oz	14	7.5 a-c	6 d-f	6.0 f	6.3 ef
Control		6 f	5.5 ef	6.0 f	6.3 ef
Prudent Plus 5 fl oz + Nutrol 3 oz	14	6.8 c-f	6.3 c-f	6.3 ef	6 f
Emerald Isle #1 CPR 6 oz + NRTF N 3 oz + NRTF K 3					
oz + NRTF Si 3 oz + Daconil Ultrex 3.2 oz <sup>b</sup>	14	6 f	5.5 ef	6.0 f	6 f

<sup>&</sup>lt;sup>a</sup> Mean of 4 replications; means followed by the same letter do not significantly differ (LSD, p=0.05).

## **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". Fertility was maintained at about  $\frac{1}{4}$  lb N/1000 ft<sup>2</sup>/month (18-3-12). All treatments received  $\frac{1}{2}$  lb N/1000 ft<sup>2</sup> application on 6/22 followed by 1/8 lb N/1000 ft<sup>2</sup> applications to all treatments except the Gary's Green and Emerald Isle treatments on 6/3, 6/16 7/12, 7/26, 8/10, and 8/24. The Gary's Green combinations and the Emerald Isle programs received adjusted amounts of urea to offset the nitrogen contained in the products. The total nitrogen they received was equivalent to that received by all of the other treatments in the study. 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 36 PSI in a 48 GPA spray volume using a  $CO_2$  backpack sprayer and a single 8002E TeeJet flat fan nozzle. Initial application of all treatments was made on May 19, unless indicated otherwise in Table 10. Re-applications of treatments on a 14 day schedule were made on 5/19, 6/3, 6/16, 6/30, 7/13, 7/28, 8/10, and 8/24, or as listed in Table 10. The Emerald Isle treatments received a Daconil Ultrex (3.2 oz) treatment on 7/23, 8/10, and 8/24. Turfgrass quality was 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).

As can be seen in Table 10, many treatments provided significantly better turf quality than the control. The Signature combination and program treatments provided very good turf quality throughout the study as did the Aviator/pentathlon program, Spectro + Alude, Prudent Plus program, Emerald Isle program, and Gary's Green programs. Since the weather was so mild this season, the Daconil Ultrex treatment provided good turf quality that was not significantly different from any of the top-performing treatments.

Table 10. Mean quality ratings for summer decline in annual bluegrass 2004

<sup>&</sup>lt;sup>b</sup> Treatments initiated on 6/3 and Daconil Ultrex (3.2 oz/1000 sq ft) applied on 7/28, 8/10, and 8/23.

Location: Hancock Turf Research Center, E. Lansing, MI.
Rating Scale: 1-10 scale, where 1 = poor, 10 = excellent and 7 = acceptable.

		21-Jun	9-Jul	18-Aug	26-Jul	25-Aug	2-Sep
Treatment and Rate/1000 sq ft	Interval (Days)	Mean <sup>a</sup>					
Chipco Signature 4 oz + Compass 0.15 oz	5/19	7.0 c-e	7.5 a-d	7.5ab	7.5 ab	8.0 a	8.0 a
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	6/3				]		
Chipco Signature 4 oz + Bayleton 0.5 oz	6/16						
Chipco Signature 4 oz + Compass 0.15 oz	6/30						
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	7/13						
Chipco Signature 4 oz + Bayleton 0.5 oz	7/28, 8/10, 8/24						
Chipco Signature 4 oz + Compass 0.15 oz	5/19	7.3 b-d	7.5 a-d	7.5 ab	7.5 ab	7.8 a	8.0 a
Chipco Signature 4 oz + Daconil Ultrex 3.2 oz	6/3						
Chipco Signature 4 oz + Bayleton 0.5 oz	6/16						
Chipco Signature 4 oz + Heritage 0.2 oz	6/30						
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	7/13, 7/28, 8/10, 8/24						
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	14	7.0 c-e	7.0 c-f	7.0 a-d	7.5 ab	7.5 ab	7.8 a
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	6/3	7.0 c-e	7.5 a-d	7.3 a-c	7.5 ab	7.5 ab	7.8 a
Chipco Signature 4 oz + Bayleton 0.5 oz	6/16						
Chipco Signature 4 oz + Compass 0.15 oz	6/30				]		
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	7/13						
Chipco Signature 4 oz + Bayleton 0.5 oz	7/28				]		
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	8/10						
Chipco Signature 4 oz + Bayleton 0.5 oz	8/24						
Chipco Signature 4 oz + Daconil Ultrex 3.2 oz	6/3	7.3 b-d	8.3 a	7.5 ab	7.8 a	7.8 a	7.8 a
Chipco Signature 4 oz + Bayleton 0.5 oz	6/16						
Chipco Signature 4 oz + Heritage 0.2 oz	6/30						
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	7/13						
Chipco Signature 4 oz + Bayleton 0.5 oz	7/28						
Chipco Signature 4 oz + Chipco 26GT 4 fl oz	8/10						
Chipco Signature 4 oz + Bayleton 0.5 oz	8/24						
Ch Signature Aliette 4 oz + Daconil Ultrex 3.2 oz	14	7.5 a-c	7.8 a-c	7.5 ab	7.8 a	7.5 ab	7.5 ab
Aviator 1 fl oz + Pentathlon 4LF 12 fl oz/M	5/7, 5/19	6.5 ef	6.8 d-g	7.0 a-d	6.8 b-e	7.0 bc	7.3 a-c
GX-734 9 fl oz	14 days from 6/24 - 8/10				]		
Aviator 1 fl oz + Pentathlon 4LF 12 fl oz/M	8/24						
Aviator 1 fl oz + Pentathlon 4LF 12 fl oz/M	5/7, 5/19	6.3 f	7.3 b-e	6.3 d-g	7.3 a-c	6.0 e-g	6.8 b-d

Vital Sign 6 oz + Concorde 82.5WDG 3.2 fl oz	14 days from 6/24 - 8/10			]	]		
Aviator 1 fl oz + Pentathlon 4LF 12 fl oz/M	8/24						
Spectro 4 oz + Alude 5.5 fl oz	14	6.8 d-f	6.8 d-g	6.8 b-e	6.5 c-e	6.8 cd	6.8 b-d
Prudent Plus 5 oz + Nutrol 3 oz + Daconil Ultrex 3.2 oz	14	6.8 d-f	7.0 c-f	6.8 b-e	7.5 ab	6.8 cd	6.8 b-d
Emerald Isle #1 Fairway SeaQuential 3 oz + Fairway 6 oz + NRTF NPK 4 oz + Daconil Ultrex 3.2 oz <sup>b</sup>	14	6.8 d-f	6.0 g	6.5 c-f	6.5 c-e	6.5 c-e	6.5 c-e
Gary's Green 6 fl oz + PK Plus 6 fl oz + Ultra Plex 3 fl oz + Daconil Ultrex 2 oz	14	8.0 a	7.8 a-c	6.5 c-f	7.0 a-d	6.3 d-f	6.3 d-f
Gary's Green 6 fl oz + PK Plus 6 fl oz + Ultra Plex 3 fl oz	14	7.5 a-c	7.0 c-f	6.0 e-h	7.0 a-d	6.0 e-g	6.0 d-g
Endorse 4 oz + Alude 5.5 fl oz	14	7.0 c-e	7.0 c-f	6.0 e-h	6.8 b-e	6.0 e-g	6.0 d-g
Gary's Green 6 fl oz + Ultra Plex 6 fl oz	14	7.8 ab	6.3 fg	5.8 f-i	6.5 c-e	5.8 f-h	5.8 e-h
Alude 5.5 fl oz + Protect 8 oz	14	6.8 d-f	6.8 d-g	5.8 f-i	6.3 de	5.5 g-i	5.8 e-h
Prudent Plus 5 oz + Nutrol 3 oz	14	6.8 d-f	6.5 e-g	5.3 hi	6.5 c-e	5.5 g-i	5.3 g-h
Control		6.5 ef	6.0 g	5.0 i	6.3 de	5.0 i	5.0 h

<sup>&</sup>lt;sup>a</sup> Mean of 4 replications; means followed by the same letter do not significantly differ (LSD, 0.05).
<sup>b</sup> Treatments initiated on 6/3 and Daconil Ultrex (3.2 oz/1000 sq ft) applied on 7/28, 8/10, and 8/24.