Fungicide efficacy on a demethylation inhibitor (DMI) and benzimidazole (BM) resistant dollar spot population, Summer 2010

This evaluation was conducted at the Hartford Golf Club in Hartford, CT. In vitro sensitivity determined that *S. homoeocarpa* isolates sampled were field resistant (> 50% RMG has been associated with DMI field resistance) (Fig. 1). Moreover, 88% of isolates sampled were resistant to the benzimidazole fungicide class. The objective of this trial was to test fungicide treatments and other products for field efficacy at a location with resistance to BM and DMI fungicides and to provide data on resistance management of dollar spot. The plot was maintained at fairway height and consisted mostly of creeping bentgrass with some annual bluegrass and perennial ryegrass. The site was irrigated as needed to prevent drought stress.

Weekly ratings of the number of dollar spot infection centers were made. Photographs of each plot were taken at each rating date. Individual plots measured 3x6 ft, and were arranged in a randomized complete block design with three replications.

Fungicides and products (see Table) were applied based on label or suggested rates. Individual treatments were applied at a nozzle pressure of 40 psi using a CO2 pressurized boom sprayer equipped with two XR TeeJet 8004VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 2 gallons of water per 1000 ft². Applications were made on 30 July (all treatments) prior to the onset of favorable disease conditions, and then followed a spray interval as indicated in the Table until 16 September when the last treatment was made. Dollar spot severity was rated by counting disease infection centers. Data was subject to an analysis of variance, however, no significant differences were observed among treatments throughout all rating dates. Area Under Disease Progress Curve values were not significantly different and are listed in the table for reference.

**Results and Discussion.** Environmental conditions were not favorable for dollar spot infection and untreated plots did not incur significantly more disease than any other plot. AUDPC values for the respective treatments are ranked high to low for reference. DPX-LEM17-50 applied at a rate
of 0.5 oz/1,000 ft² on a 21-day interval incurred the highest AUDPC value while Echo Ultimate applied at a rate of 3.2 oz/1,000 ft² on a 14-day interval had the lowest. Interval nor rate of applications had an effect on dollar spot control. Natural dollar spot infection in the summer of 2010 did not reach levels that impacted turf quality or playability. No differences in turf quality were observed. These results strongly suggest that scheduled fungicide treatments or "programmed treatments" can be economically wasteful and expose turf to unnecessary chemical amendments.

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<th>Treatment and oz/1,000 ft²</th>
<th>Interval (days)</th>
<th>AUDPC²</th>
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² Area Under Disease Progress Curve (AUDPC)
³ Spray rotation: Cuttless MEC (30 July), Banner Maxx (17 August), Cuttless MEC (9 September), Banner Maxx (16 September)
⁴ Tank Mix of Plant Growth Regulator (PGR) and Demethylation Inhibitor (DMI) fungicide at half rates.