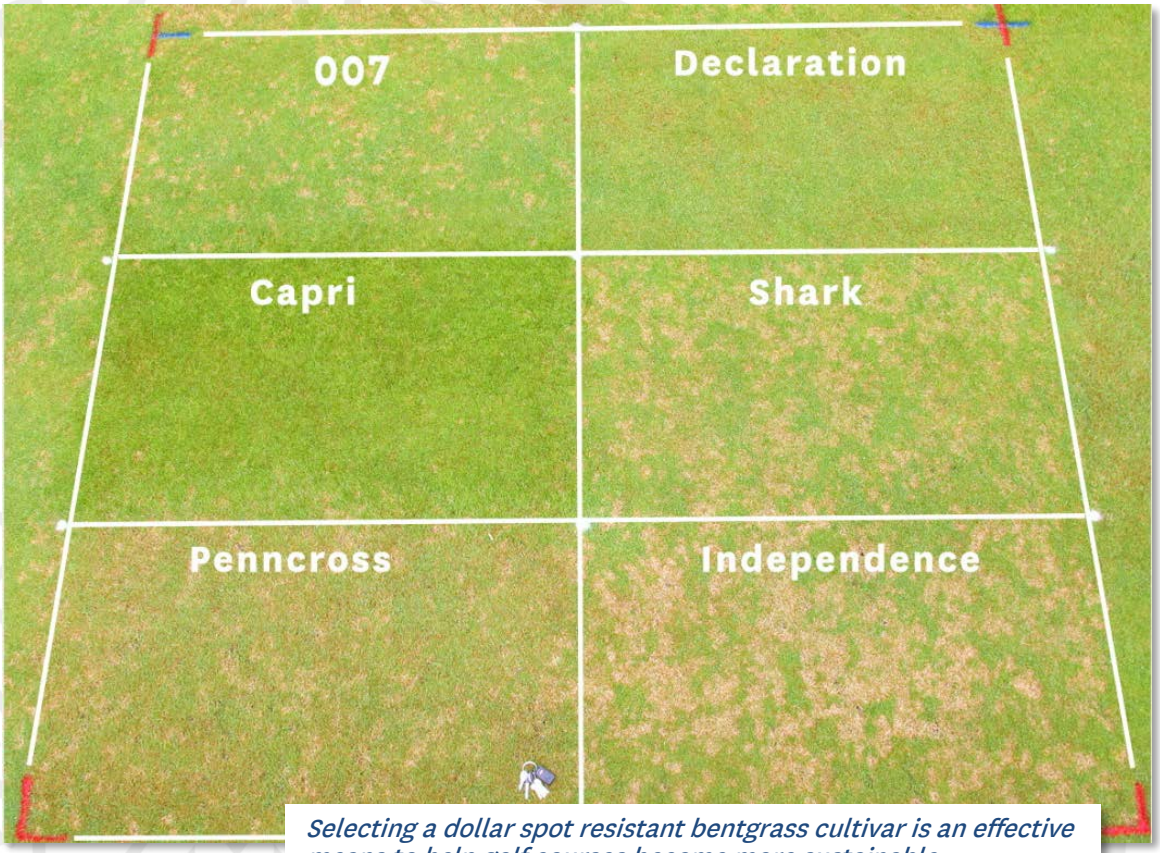
Reducing Fungicide Applications On Bentgrass Fairways



Selecting a dollar spot resistant bentgrass cultivar is an effective means to help golf courses become more sustainable.

Dollar spot (*Sclerotinia homoeocarpa*) is a common and persistent disease of bentgrass fairways. Fairway turf typically comprises 30 to 40 acres on golf courses. Fungicide applications to control dollar spot can be expensive and have environmental consequences. Rutgers University is evaluating dollar spot disease progress and severity on bentgrasses. The scientists also are looking at two weather-based models for predicting dollar spot epidemics. The effectiveness of fungicide timing is another goal of the research.

The first study included six bentgrass cultivars with varying resistance to dollar spot. Researchers evaluated dollar spot occurrence every two to five days. They compared observations to a growing degree-day and a weather regression model (Figure 1). For susceptible varieties, the models worked well in the first year (2015) but overpredicted in the second year (2016).

A second study included the effect of fungicide applications before the disease occurred. Declaration (more tolerant) and Independence (susceptible) were the two bentgrass cultivars tested. The initial fungicide application had a minimal impact on control of dollar spot in 2015. A threshold program (less than two spots per 8 square feet) produced good to excellent, season-long disease control. Total fungicide inputs and the level of disease control depended on the cultivar and, to a lesser extent, the initial fungicide timing.

Understanding dollar spot disease will help golf course superintendents better target practices to control the disease. This research, along with other studies across the U.S. will continue. The combination of resistant cultivars, fungicide timing, and disease models will lead to reduced fungicide usage on fairways.

Source: James A. Murphy, James Hempfling and Bruce B. Clarke, Rutgers University

Additional Information:

Bentgrass Tolerance, Disease Predictive Models and Fungicide Timing to Control Dollar Spot on Fairway Turf

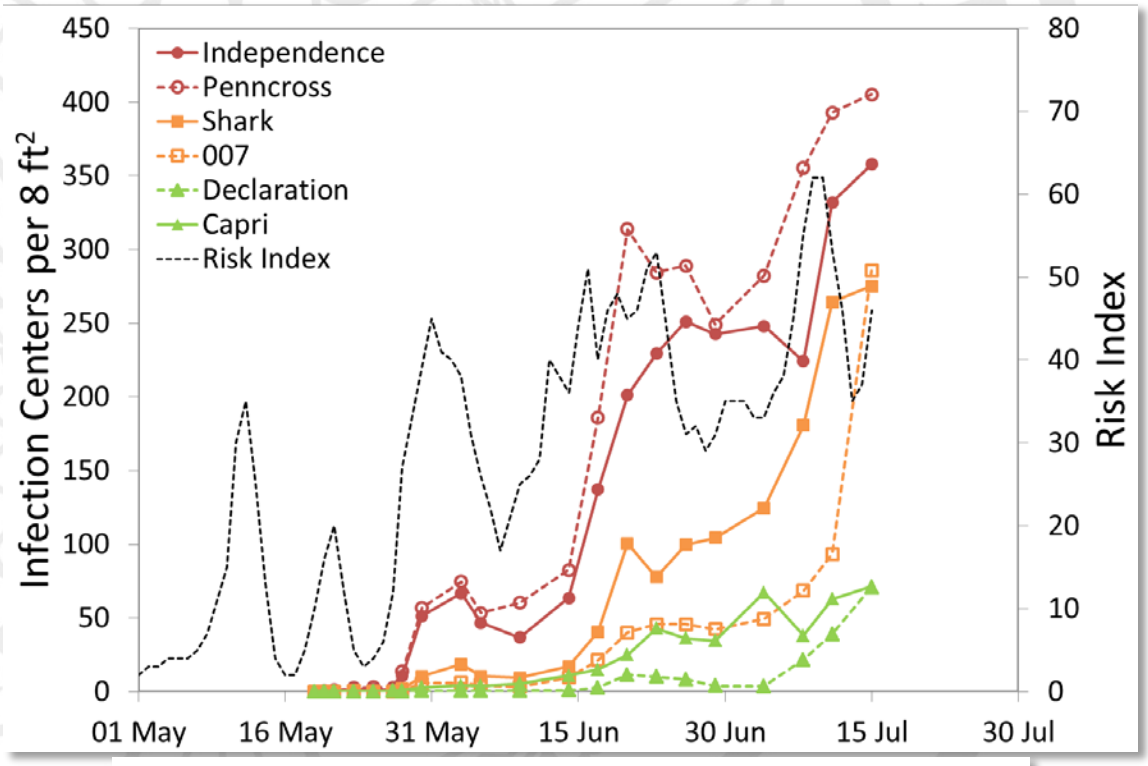


Figure 1: Number of dollar spot infection centers in highly susceptible (red lines), moderately susceptible (orange lines), and more tolerant (green lines) bentgrass cultivars and dollar spot risk index (black line) calculated using a weather-based, logistic regression model during 2015.