

Each cultivar is replicated 4 times within each irrigation regime. Irrigation regimes are replicated three times. Fertility and other general maintenance practices are consistent among all plots, with fertility being maintained at approximately 0.5 lb nitrogen/1000 sq ft/month.

This is the third year of this research trial. In 2011, trends in the data showed that infrequent nighttime irrigation resulted in the most dollar spot among all of the cultivars. In 2012, very little disease developed in the study site, but what little disease did occur followed the trends observed in 2011. The 2013 season has resulted in tremendous dollar spot pressure to date, with the expectation of an increase in disease incidence through the next month or so. Dollar spot differences among irrigation regimes and cultivars can be seen, providing information regarding irrigation regime, based on time of day and frequency of application, combined with cultivar selection and their impact on dollar spot incidence.

## **Stop 2. Carl Schwartzkopf Lab at the Hancock Turfgrass Research Center (HTRC)**

Vijaya Shukla, Sanalkumar Krishnan, and Dr. Emily Merewitz

At Michigan State University, the HTRC lab has been established with an extremely generous donation from Mr. Carl Schwartzkopf, an MSU alumnus. His generous endowment facilitated the complete renovation of the HTRC laboratory. When complete, the HTRC lab will be fully equipped with new lab benches, growth chambers, a fume hood, gas and water supply on the lab benches, digital balances, incubators, shakers and centrifuges with thermal control, new computers, and advanced microscope equipment.

Thanks to Carl, this lab will allow students and researchers to accomplish turf studies at MSU more efficiently than ever before. These new facilities will be instrumental in the study of various research projects related to environmental stresses, turf pathogens, and best turf management practices. This field day stop will show off the new lab and describe various studies and types of equipment that will be utilized in the lab. As an example of the types of projects we will be conducting in the new lab, we will discuss a growth chamber study that aimed to evaluate the effects of Primo on turf hormones involved in biotic and abiotic stress responses in turfgrasses.

## **Stop 3. Summer Stress in Creeping Bentgrass and Annual Bluegrass Putting Greens**

Dr. Joe Vargas, Jr., Nancy Dykema, Eric Galbraith, and Nick Popiel

Summer Stress Syndrome has been associated with thinning and dying of turf during the warm summer months when turf goes under stress. It is especially problematic on low cut turf growing in poor environments. This includes greens growing in shaded areas or where there is limited air movement. Fungicides applied alone and in combination with other products on a preventive basis have been shown to prevent this decline from occurring. These products not

Fairy Ring. Fairy ring is a disease caused by many soil-inhabiting basidiomycete fungi. The fungus typically grows in a circular pattern and degrades organic matter present in thatch and soil. The disease is often identified by dark green circular rings in the turf, varying in diameter from several inches to 100 feet or more. Many times, fairy rings will not kill the turf but are nonetheless a cosmetic problem. They can be found in many different soil types, but are particularly problematic in dry soils, including sandy soils.

Fairy rings may be managed in a variety of ways, including masking them with fertility or even the use of fungicides like Tebuconazole, azoxystrobin, or Polyoxin D.

## **Stop 18. Carl Schwartzkopf Lab at the Hancock Turfgrass Research Center (HTRC)**

Vijaya Shukla, Sanalkumar Krishnan, and Dr. Emily Merewitz

See pg. 6 for write-up.