

With summer almost upon us I thought I would put myself out there and try predicting what the summer will be like weather-wise. Predicting weather, at least for me, is as much of a crapshoot as filling out my 2011 NCAA basketball brackets (and given my poor record of picking NCAA champions, no doubt my credibility is low).

Complicating matters, it seems we hardly ever experience normal temperatures and rainfall. However, looking at climate trends, we may at least get an idea of where we are heading. Based on the following, I think it's likely we will have a hot summer with periodic downpours similar to those of 2010. I base this prediction on the following:

- The average temperature in the United States has increased 2 degrees Fahrenheit in the last 50 years. This increase is greater than the global average (Peterson, et al. 2009).

- The eight warmest years on record since 1880 have all occurred since 2001, the warmest being 2005 (NOAA, 2008).

- Increasing temperatures tend to increase evaporation that leads to more precipitation. As global temperatures have increased, so has precipitation. In the United States precipitation has increased 5 percent in the last 50 years.

- During the last 50 years the greatest increase in precipitation in the United States has occurred in the Northeast and Midwest.

- Climate models predict a tendency for an increase in heavy downpours and a decrease in the lightest precipitation events.

High soil temperatures impact cool season turfgrass growth such as creeping bentgrass by causing root growth to slow. Eventually, that slowing could lead to a dieback. Periodic heavy downpours saturate the soil, causing anoxic conditions that only accelerate root death, which can occur within hours. Although warm season turfgrasses are adapted to higher temperature conditions, root loss can occur with high soil moisture content.

Golf course superintendents in South Florida know the combination of hot and wet

A Summer Forecast for Turf

BY KARL DANNEBERGER



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conditions can greatly reduce bermudagrass root systems. It goes without saying that an efficient drainage system along with a root zone that has an adequate infiltration rate is critical to maintaining turf. Irrigation practices should continue to keep the turf on the dry side so as not to contribute to a situation where you can lose control of the turf during summer rains.

Diseases like pythium blight and brown patch can be expected to be severe. In addition, on annual bluegrass (*poa annua*) turf, summer patch can be quite devastating under high temperatures and cycles of rain and intermittent dry periods. Last year, throughout the Midwest we saw a spike in summer patch in areas where it has not been a problem before.

In many ways, weather like that of summer 2010 should occur more frequently. Given that, mechanical management practices like mowing, verticutting, grooming, brushing, topdressing and coring should be adjusted accordingly — mainly through reducing the intensity. The key is predicting when the stress is beginning. So track soil temperatures. Once average soil temperatures remain above 70 degrees Fahrenheit on cool season turf the stress period is underway.

Finally, I will hedge my bets on my prediction. As I am writing this column, in Ohio we are approximately one week behind for the plant growth and development season. At this time last year we were a week to 10 days ahead. So maybe this year will not be as bad as last year and we will actually get a breather. But given the long-range outlook, any breather will be short-lived.

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