

January 19, 2016

Turfgrass managers:

I do not recall a winter in Florida in which the environmental variables aligned more perfectly for turfgrass diseases to thrive (Fig. 1). The major environmental conditions that influence disease development are temperature, moisture, humidity and sunlight. In 2015, during the months of November and December, these variables have worked against us and have resulted in extremely challenging conditions in which to maintain acceptable turfgrass. At the University of Florida Ft. Lauderdale Research and Education Center, air temperatures averaged 10° above normal and soil temperatures 5° above normal. Relative humidity was significantly higher throughout the months of September through December. Rainfall exceeded 300% above our historical average and solar radiation was reduced by 15%. The included graphs provide the 14 year average and 2015 actual environmental data.

Instead of rewording the obvious, I will simply quote Dr. Beard from "Turfgrass Management for Golf Courses".

"Excessively wet conditions are particularly favorable for the development of most fungal diseases. Wet, humid weather.....is favorable for development of most diseases caused by fungi. Shade effects are particularly striking in terms of disease activity. A low sunlight intensity and the resultant delicate, succulent shoot tissues – combined with high humidities, moderate temperatures, and restricted air movement – create a condition that makes the host plant especially prone to fungal attack and disease development."

Fungicide applications and dew removal may help alleviate turfgrass stress under our current conditions. However, as long as the temperatures are mild and rainfall continues, turfgrass recovery may be delayed and full recovery limited for weeks or potentially months. Turfgrass is resilient and will recover given sufficient time and good growing conditions.



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Figure 1. Rhizoctonia on bermudagrass in Jay, FL. January 5, 2016. Photo credit Dr. Bryan Unruh.

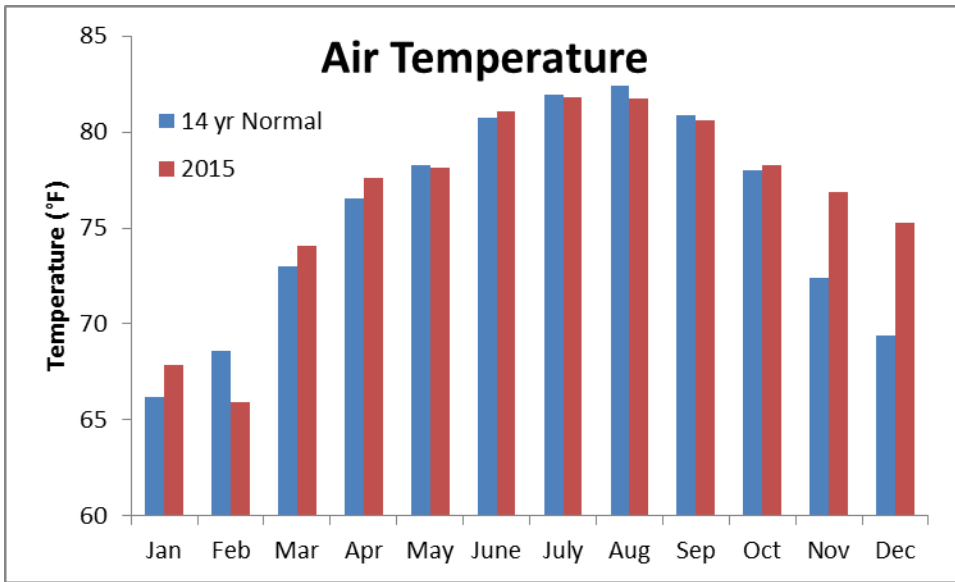


Figure 2. Historical and 2015 actual average monthly air temperature in Ft. Lauderdale, FL.

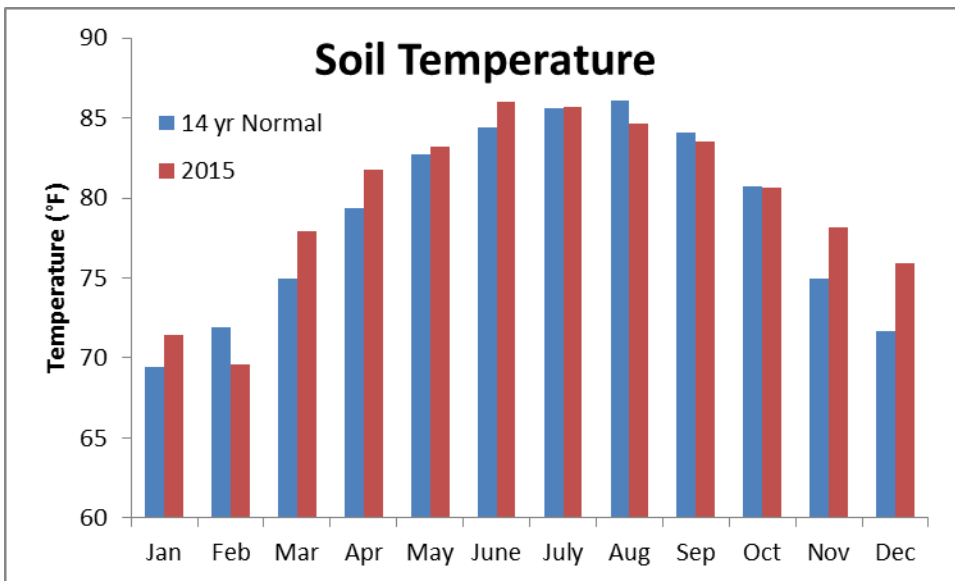


Figure 3. Historical and 2015 actual average monthly soil temperature in Ft. Lauderdale, FL.

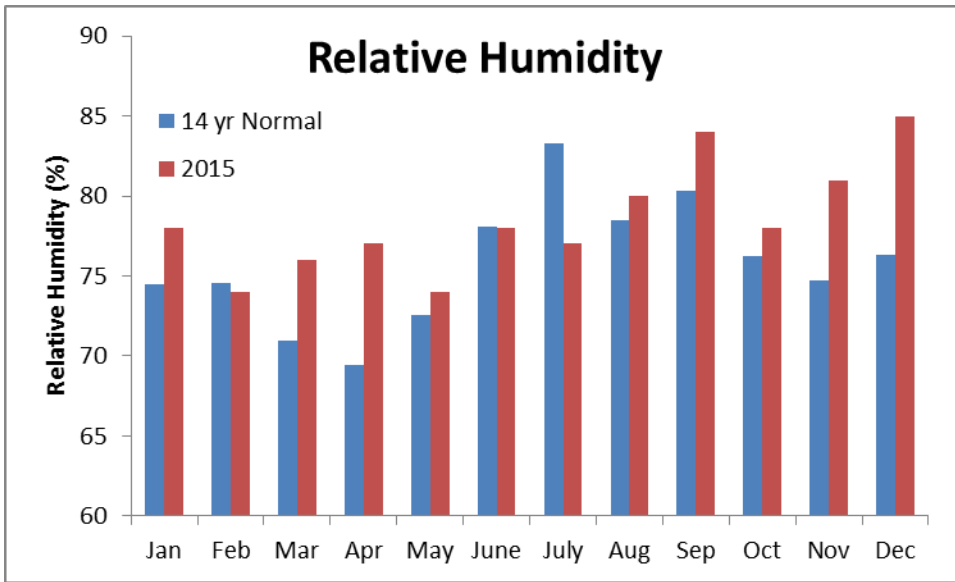


Figure 4. Historical and 2015 actual average monthly relative humidity in Ft. Lauderdale, FL.

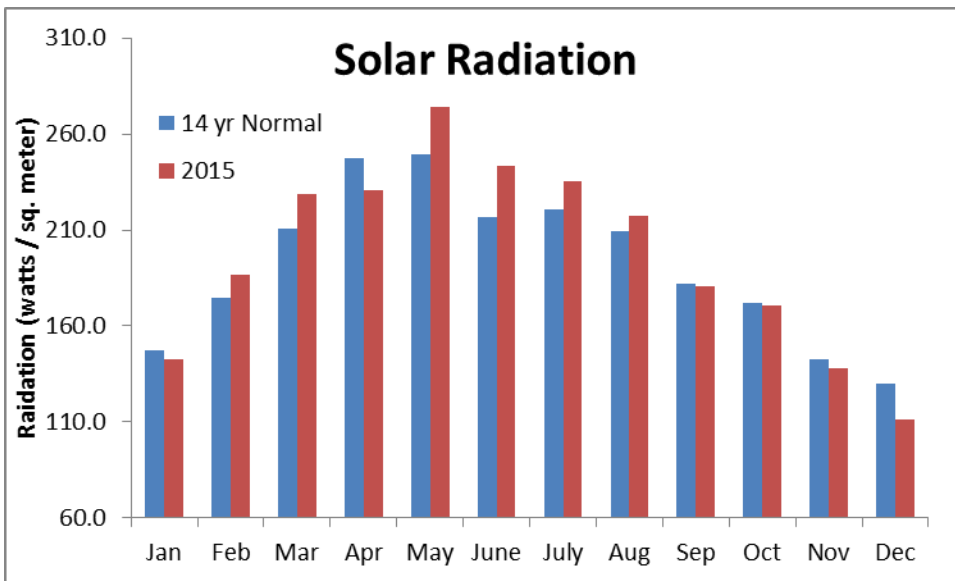


Figure 5. Historical and 2015 actual average monthly solar radiation in Ft. Lauderdale, FL.

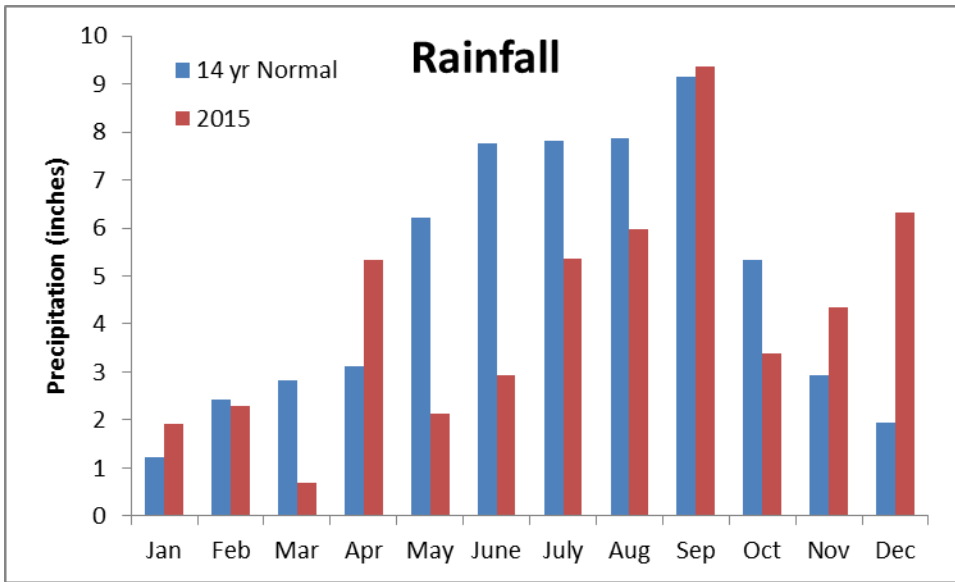


Figure 6. Historical and 2015 actual average monthly rainfall in Ft. Lauderdale, FL.