Clark Talks Turf

TIMELY TURF ADVICE

Stressed Annual Bluegrass or Creeping Bentgrass Greens? Anthracnose is Likely to Follow

Bruce Clarke is a professor of turfgrass pathology and Jim Murphy is a professor of turfgrass science at Rutgers University. They are devoted to learning more about anthracnose and how to manage it.

Q Let's start with the anthracnose fungi. What conditions are most favorable for an outbreak of anthracnose? **Bruce Clarke (BC):** Any stress, both weather and cultural, that weakens the plant makes turf more susceptible to anthracnose (*Colletotrichum cereale*). We have determined there are cool weather anthracnose isolates that thrive when air temperatures are in the 50s and 60s and warm weather isolates that thrive when air temperatures are in the upper 80s and 90s. Most courses have the warm weather anthracnose isolates, some courses have just the cool weather isolates, and a few have both.

Q What is the distribution of anthracnose? **BC:** Anthracnose is found worldwide on annual bluegrass and/or creeping bentgrass greens that are under stress. Annual bluegrass is the primary host but creeping bentgrass greens under stress can also be susceptible to anthracnose.

Q What steps can a superintendent take on a preventive basis to manage anthracnose? **BC:** Reduce stress on the grass. Even the best fungicide programs won't be completely effective unless management practices are implemented to reduce stress on the grass and improve turf health.

A preventive fungicide program is recommended if the course has a history of anthracnose. In general, we recommend the first fungicide application to manage anthracnose be made three to four weeks prior to the normal date of anthracnose occurrence.

There are eight or nine groups of fungicides that show effectiveness controlling anthracnose. Some isolates of anthracnose have shown resistance to certain fungicides so it is very important to design the fungicide program to control anthracnose while limiting the potential for resistance to develop.

Q What do you recommend for a curative fungicide approach if a course is experiencing anthracnose for the first time? **BC:** Again, reduce stress on the turfgrass and improve plant health.

We suggest a superintendent apply a tank mix of two fungicides; one of which should be either chlorothalonil or a phosphonate product. Both chlorothalonil and the phosphonates have been shown to be very effective controlling anthracnose. The second fungicide can be selected from a number of effective fungicide groups such as the DMIs, strobilurins, benzimidazoles, phenylpyrroles, dicarboximides, or antibiotics (polyoxin-D).

Q On to stress reduction and cultural management with Jim Murphy. I know you and the group at Rutgers have investigated the influence of many cultural practices on anthracnose. Where should a superintendent start? **Jim Murphy (JM):** Raise the mowing height. Even slightly increasing mowing height will improve turfgrass health and reduce the severity of anthracnose. I know it's easier said than done. Let's face it, green speed drives mowing height. We examined combinations of mowing height, double mowing every day and rolling every day to provide acceptable green speed. We were able to develop combinations of a slightly increased mowing height along with either double mowing every day or rolling every day that improved turfgrass health and reduced anthracnose severity while providing green speed over 10 feet.

Q What nitrogen fertility practices do you recommend to reduce anthracnose severity and improve turfgrass health? **JM:** Increasing the nitrogen fertility rate in the summer will have a big impact. Applying 0.1 or 0.2 lbs. nitrogen per 1,000 sq. ft. every week or every other week will improve turfgrass health and reduce anthracnose severity. We have seen up to a 50 percent disease reduction by increasing nitrogen fertilization in summer. Increasing nitrogen fertilization in spring is also helpful to reduce anthracnose.

See the remainder of this interview, which discusses how topdressing affects anthracnose and upcoming research, in the Golfdom Insider email newsletter available at www.Golfdom.com.

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