

A Look At ...



A LOOK AT ... FROM AN INDEPENDENT PERSPECTIVE from  
National Organization Responding Against HOJE that seek to harm the Green Space Industry (NORAHG)

# Anthracnose

## A Look At Turfgrass Disease Management

Bruce Clarke, Professor of Turfgrass Pathology

Jim Murphy, Professor of Turfgrass Science

Rutgers University ( New Jersey )

Golfdom Insider

Selected and adapted excerpts

### Introduction

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Bruce Clarke is Professor of Turfgrass Pathology, and Jim Murphy is Professor of Turfgrass Science at Rutgers University, in the State of New Jersey.

Bruce and Jim, along with several graduate students, have devoted a considerable amount of effort over the last few years learning more about Anthracnose and how to manage it.

Since in the 1990s, Anthracnose disease, which is caused by the fungus *Colletotrichum cereale* Manns has emerged as one of the MOST DESTRUCTIVE DISEASES OF TURFGRASSES on golf course putting greens in the United States and Canada.

Since that time, the incidence, severity and geographic range of the disease has GREATLY EXPANDED.



# Anthracnose

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### What conditions are most favourable for an outbreak of Anthracnose ?

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ANY STRESS, both weather and cultural, that WEAKENS THE PLANT makes turf MORE SUSCEPTIBLE to Anthracnose ( *Colletotrichum cereale* ).

There are TWO types of Anthracnose isolates –

- Cool-Weather-Anthracnose isolates that thrive when air temperatures are in the 50s and 60s Fahrenheit
- Warm-Weather-Anthracnose isolates that thrive when air temperatures are in the upper 80s and 90s Fahrenheit.

MOST golf courses have the Warm-Weather-Anthracnose isolates, some courses have just the cool weather isolates, and a few have both.

### What is the distribution of Anthracnose ?

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Anthracnose is found world-wide on Annual Bluegrass and/or Creeping Bentgrass PUTTING GREENS that are under STRESS.

Annual Bluegrass is the primary host, but Creeping Bentgrass putting greens under stress can also be susceptible to Anthracnose.

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### What steps can be taken on a preventive basis to manage Anthracnose ?

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REDUCE STRESS on the grass.

Even the best fungicide programs will NOT 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 golf course has a history of Anthracnose.

In general, it is recommended that the FIRST FUNGICIDE APPLICATION to manage Anthracnose be made THREE TO FOUR WEEKS PRIOR to the normal date of Anthracnose occurrence.

In the Mid-Atlantic Region, the FIRST fungicide application is usually made in MID- TO LATE-MAY, and continues EVERY OTHER WEEK until the summer weather ends in late-August.

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.

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### What is recommended for a curative fungicide approach when experiencing Anthracnose for the first time ?

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Again, REDUCE STRESS on the turfgrass and IMPROVE PLANT HEALTH.

The application of a tank-mix of TWO fungicides is suggested.

One tank-mix component should be either chlorothalonil ( Daconil ) or phosphonate ( Aliette ).

Both chlorothalonil and the phosphonates have been shown to be very effective in the control of Anthracnose.

The second tank-mix component can be selected from a number of effective fungicide groups such as ...

- anti-biotics ( polyoxin-D )
- benzimidazoles ( thiophanate-methyl, Senator )
- demethylation-inhibitors (myclobutanil, Eagle ; propiconazole, Banner; triticonazole, Premis )
- dicarboximides ( iprodione, Rovral )
- phenyl-pyrroles ( fludioxonil, one of three fungicides in Instrata )
- strobilurins ( azoxystrobin, Heritage; trifloxystrobin, Compass )

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**What is the most influential cultural practice that will reduce the severity of Anthracnose ?**

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RAISE the mowing height.

Even slightly increasing the mowing height will reduce the severity of Anthracnose as well as improve turfgrass health.

**What are the NITROGEN FERTILIZATION practices that reduce the severity of Anthracnose ?**

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INCREASING the nitrogen fertility rate in the summer will have a big impact.

Applying 0.1 or 0.2 pound of nitrogen per 1,000 square feet every week, or every other week, will reduce Anthracnose severity and will improve turfgrass health.

Anthracnose has been reduced by up to 50 per cent by increasing nitrogen fertilization in summer.

Increasing nitrogen fertilization in spring is also helpful to reduce Anthracnose.

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### What are the recommended IRRIGATION practices that reduce the severity of Anthracnose ?

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Is drier better ?

No.

Research has shown that when grass goes through cycles of wilting followed by syringing to revive it, Anthracnose is brought on very quickly.

It is better to maintain turf at a sufficient moisture level to prevent wilting while not going overboard and creating wet conditions.

Anthracnose is also observed regularly in the very wet areas of putting greens.

### What are the recommended TOP-DRESSING practices that reduce the severity of Anthracnose ?

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The research results have been clear.

Regular top-dressing in the summer reduces Anthracnose.

The explanation for this finding is that top-dressing creates a firmer surface for the mowers to travel over, and effectively increases the height of cut, leading to healthier turf.

A LOOK AT is a Report presented by National Organization Responding Against Hujе that seek to harm or misinform the Green Space Industry (NORAHG). It is a series of Reports destined for the Green Space Industry, nationwide across Canada, the United States, and overseas. This Report has been developed for the education and entertainment of the reader by providing TECHNICAL INFORMATION WITH COMMENTARY.

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A LOOK AT, and its various incarnations, is the brainchild of William H. Gathercole and his entourage. Mr. Gathercole is a principal founder of the Modern Professional Lawn Care Industry in both Ontario and Quebec. He holds a degree in Horticulture from the University of Guelph, and another pure and applied science degree from McGill University. Mr. Gathercole was the FIRST PERSON EVER to obtain University degrees and contribute to BOTH the Professional Lawn Care and Golf Maintenance Industries. He has worked in virtually all aspects of the Green Space Industry, including golf, professional lawn care, and distribution. Mr. Gathercole has supervised, consulted, programmed, and/or overseen the successful execution of hundreds of thousands of management operations in the urban landscape. He has advised, certified, instructed, and trained thousands of turf and ornamental managers and technicians. Mr. Gathercole has also been an agricultural agronomist. Mr. Gathercole is personally credited for crafting the Exception Status that has allowed the Golf Industry to avoid being subjected to the lunatic-terrorist-prohibition of pest control products. He is also the creator of the signs that are now used for posting after application. Mr. Gathercole is now retired, although his name continues to appear as the founder of A LOOK AT.



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