



Overview

Anthracnose, *Colletotrichum cereale* (formerly *C. graminicola*), is a senectopathic disease, meaning it can develop on dead or senesced leaf material. In severe cases, anthracnose can also develop on green tissue. Anthracnose causes foliar blight, as well as basal rot of roots, crowns and stolons. Primary hosts for anthracnose are annual bluegrass and creeping bentgrass. Other hosts include Bermudagrass, Centipedegrass, Fescue, other *Poa* sp. and Ryegrass.

On bentgrass, anthracnose generally occurs in the summer or early fall, but anthracnose can occur any time of the year on annual bluegrass.

Environmental Conditions Favoring Disease Development

Compaction and inadequate drainage and fertility favor anthracnose development. Plants that are stressed due to low mowing height and extreme temperatures are more susceptible to infection. Optimum temperatures for disease development are between 70 and 80°F, but anthracnose can infect turf outside of this range.

Foliar Blight typically occurs during the summer when there are high temperatures and stressed turfgrass. Heat and drought stress in addition to other stress factors

mentioned above, weaken annual bluegrass or creeping bentgrass causing Favoring Disease Development foliar blight.

Basal Rot can occur throughout the season. It can start to develop in the spring. However, Basal Rot tends to be most severe in summer and fall. Nitrogen deficiency and stress from low mowing heights, compaction, and drought stress can increase basal rot development.

Symptoms and Identification

Foliar blight is recognized by yellow or reddish-brown leaves and thinning turf. With a good eye or hand lens you can see fruiting bodies (acervuli) with black spines (setae) on leaves or stems (Figure 1). Since anthracnose is senectopathic, it is important to check green tissue for acervuli. Leaves will sometimes develop oblong, reddish brown lesions. Infected annual bluegrass plants develop small, irregular patches that are yellow to orange in appearance. Creeping bentgrass infected by anthracnose tend to develop bronze patches varying in size.

Basal rot symptoms in annual bluegrass manifest as small, orangey-yellow spots. As the disease progresses individual plants and small patches turn yellow and die off. Basal

rot has not been documented on bentgrass. Plants can appear healthy, but upon closer inspection infected tillers are yellow/orange in color. Crown rot can be seen by removing the sheath and inspecting the crown of the plant. Tillers will turn yellow. Infected stems will appear rotted at the crown.

Management

Cultural

Several management practices have an impact on anthracnose severity most notably nitrogen and potassium fertility, mowing height, topdressing and irrigation. Regular tissue sampling and soil tests can help determine fertility needs. Providing adequate fertility will increase the plant's ability to endure stress. Increasing mowing height and incorporating rolling has shown to decrease anthracnose infestation. Aerification and topdressing can reduce the severity of anthracnose as well as reduce thatch, improve ball roll, and insulate plant crowns. Properly timed irrigation and hand syringing to avoid wilt and minimize leaf wetness period will prevent drought stress.

Chemical

While proper cultural management practices are the foundation for healthy, vigorous turf, fungicides are an important tool to protect turfgrass from additional damage. There are several classes of chemistry effective for anthracnose control, but fungicide resistance is a concern. Preventative fungicide applications that include Fame™ +C and Kalida™ can be used in a program for successful long-term anthracnose control. Fame +C (fluoxastrobin and chlorothalonil) and Kalida (flutriafol and fluidapyr) are effective tools for anthracnose control as well as fungicide resistance management. These products not only

provide protection for anthracnose, but also protect against other diseases, like dollar spot, fairy ring and patch diseases.



Figure 1 Acervuli and setae, R. S. Byther

References

- Smiley RW, Dernoeden PH, Clarke BB. 2017. Compendium of Turfgrass Diseases, Third Edition. American Phytopathological Society. St. Paul, MN. Pp. 56-59
- Latin, R. 2011. A Practical Guide to Turfgrass Fungicides. The American Phytopathological Society. St. Paul, MN. pp. 183-186.

Photo(s) Courtesy

Pacific Northwest Pest Management Handbooks | (pnwhandbooks.org)

Tina Bond, FMC Technical Service Manager

FAME[®]+C
FUNGICIDE

KALIDA[™]
FUNGICIDE

FMC

Always read and follow label directions. FMC, FMC logo, Fame, and Kalida are registered trademarks of FMC Corporation. ©2022 FMC Corporation. All rights reserved.