NebGuide

University of Nebraska–Lincoln Extension, Institute of Agriculture and Natural Resources

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Anthracnose of Turfgrass

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Anthracnose is a fungal turf disease most often found on bluegrass or bentgrass. This NebGuide describes the disease and how to best manage it.

Introduction

Anthracnose is a turf disease found most often on intensely managed annual bluegrass or bentgrass. At least 13 warm and cool season grasses are known to be hosts for this disease. Environmental stresses such as drought and heat make the turf more susceptible during the mid-summer months. Both cultural practices and fungicide treatment can help to mitigate this disease. The following describes the disease and how to identify and manage it.

Cause, Hosts, and Occurrence

Cause: *Colletotrichum cereale* (formerly *Colletotrichum graminicola*)
Primary Hosts: Annual bluegrass, Creeping bentgrass; most warm and cool season grasses can be a host.
Occurrence: July-August

Key Symptoms

- Irregularly shaped patches of yellow-bronze turf. May also have a reddish cast in the area *(Figure 1)*.

Figure 1. Anthracnose on bentgrass. Note the overall bronze color and dying tillers. (Photo courtesy of G.W. Wilson, Bugwood.org)

Figure 2. Fruiting structures of the anthracnose fungus (setae of the acervuli), which are visible with a 10X hand lens.*

*Figure 2 reproduced with permission from D. Settle, A. Martinez-Espinoza, L. Burpee. 2006. Anthracnose of Turfgrass. The Plant Health Instructor. DOI:10.1094/PHI-I-2006-1205-01) Photographer, J. Kaminski.

- Elongated, reddish-brown spots on the leaves *(Figure 2)*.
- Infection of the lower stem of shoots (basal rot) can result in the death of tillers and browning of lower leaves.
- Black, spiny fungal fruiting structures (acervuli) on infected leaves, visible with a 10X hand lens.

Cultural/Maintenance Practices

- Provide sufficient nitrogen to maintain a moderate growth rate through the summer.

Table I. Fungicides for Anthracnose Control in Turf[1]

Fungicide	*Fungicide Class*	*Interval (days)*	*Efficacy[2]*	*Product Names*
Azoxystrobin	Strobilurin	14-28	3	Heritage®
Chlorothalonil	Chloronitrile	7-14	3	Daconil Ultrex®[3]
Fenarimol	DMI[4]	30	2	Rubigan®
Fludioxonil	Phenylpyrrole	14	2+	Medallion®
Fluoxastrobin	Strobilurin	14-28	3	Disarm®
Hydrogen dioxide		7	L	ZeroTol®
Metconazole	DMI	14-21	3	Tourney®
Mineral oil	Not Classified	7-21	2+	Civitas™
Myclobutanil	DMI	14-21	2	Eagle®
Phosphite	Salts of phosphorus acid	14	2-3[5]	Alude™
Polyoxin D	Polyoxin	7-14	3	Endorse®
Propiconazole	DMI	14-28	2	Banner® Maxx®
Pyraclostrobin	Strobilurin	14-28	3	Insignia®
Thiophanate-methyl	MBC[4]	10-14	2	Cleary's 3336®[3]
Triadimefon	DMI	14-45	1+	Bayleton®[3]
Trifloxystrobin	Strobilurin	14-21	3+	Compass®
Triticonazole	DMI	14-28	3	Trinity®[3]

[1]Fungicide active ingredients, class, and efficacy ratings for products labeled for the control of anthracnose. Table adapted from P. Vincelli and D.W. Williams, Chemical Control of Turfgrass Diseases 2011, University of Kentucky Cooperative Extension Service.
[2]Rating system: 4 = consistently good control; 3 = good to excellent control; 2 = fair to good control; 1 = control is inconsistent but performs well in some instances; L = limited published data on effectiveness; + = intermediate between two efficacy categories.
[3]Other products with the same active ingredient may be available.
[4]DMI fungicides are demethylation inhibitors and are otherwise known as Triazole fungicides. MBC = Methyl Benzimidazole Carbamate.
[5]More effective for controlling anthracnose on *Poa annua* than on creeping bentgrass.

- Irrigate to maintain plant vigor and avoid drought stress.
- Compaction and thatch should be managed to reduce stresses.

Fungicide Program

Fungicides for anthracnose management are listed in *Table I*. Preventive spray programs have typically been more effective than curative programs for this disease. Product examples are provided for each active ingredient, but not all products are listed. Homeowner and commercial product labels will provide a list of active ingredients.

While the active ingredient may be in combination with others, users should look for a specific active ingredient with or without other chemistry modes of action.

Fungicides listed represent the best information available. Read and follow all product label directions for mixing and application.

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Index: Plant Diseases
Turf
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