

Brown Blight

[*Drechslera siccans*]



SYMPTOMS

Brown blight is a disease that occurs on perennial ryegrass during cool, wet, and cloudy periods in the spring or fall. Brown blight is a 'Helminthosporium' disease, which is a complex of diseases caused by fungi that produce large, cigar-shaped spores. Symptoms of brown blight initially appear as small, brown, round or oval spots on the perennial ryegrass leaves. As the disease progresses, the lesions expand and become more numerous, causing a brown or yellowish brown dieback of entire leaves or plants. This foliar blight stage appears in irregular patterns, although certain 'hot spots' may be more severely damaged than others.



brown blight of perennial ryegrass

Characteristic	Description
Host Grass Species	perennial ryegrass
Month(s) with symptoms	March to May, Sept to Nov
Stand Symptoms	spots, irregular distribution across turf stand
Foliar Symptoms - Location/Shape	round or oval leaf spots, blighting of entire leaves
Foliar Symptoms - Color	brown, yellow, tan
Root/Crown Symptoms	none
Fungal Signs	none

Note: Still not sure if this is the right disease? The [Turfgrass Disease Identification](#) program may be helpful. Or consult the experts at the [Turf Diagnostics Lab](#). Check the TurfFiles [glossary](#) for definitions of unfamiliar terms.

FACTORS AFFECTING DISEASE DEVELOPMENT

Brown blight is one of several Helminthosporium diseases which survive in thatch during periods that are unfavorable for disease development. These fungi are most active during periods of cool (60 to 65°F) and wet weather. Brown blight is most severe on turf that is growing slowly due to adverse weather conditions or improper management practices. Shaded areas with little or no air movement result in weak turf and extended periods of leaf wetness that favor infection and disease development. Deficient or excessive nitrogen, excessive thatch, extended periods of leaf wetness, drought stress, and mowing heights that are too low or too high encourage the development of Helminthosporium diseases. Certain cultivars of turfgrasses are very susceptible to injury from Helminthosporium diseases while many of the newly released cultivars exhibit good resistance.

CULTURAL CONTROL

Use turfgrass cultivars with resistance to this disease when available. Use of resistant cultivars is one of the best means of prevention. Select cultivars based on regional trials and University recommendations. Use blends and mixtures of cool-season grasses whenever possible. Fertilize to meet the nutritional

needs of the turf but avoid over-stimulation and the development of lush, succulent growth. Do not apply more than one pound of nitrogen per 1,000 square feet in a single application. Mowing should be done within the recommended range for each turfgrass species. Keep the mower blades sharp to prevent open wounds through which the fungus can enter. Reduce extended periods of leaf wetness by watering deeply but infrequently to wet the entire root zone. Do not irrigate before sunset or after sunrise, and ensure good surface and soil drainage. Remove unwanted vegetation that impedes air movement and prune trees to allow for light penetration. Power rake or hollow-tine aerify to remove excessive thatch and reduce pathogen survival.

CHEMICAL CONTROL

Brown blight can be controlled on a preventative or curative basis. For best results, fungicides should be applied in the early stages of disease development.

Fungicide	Efficacy ⁽¹⁾	Resistance Risk ⁽²⁾	Class ⁽³⁾	Products ⁽⁴⁾
iprodione + thiophanate-methyl**	++++	6	benzimidazole	26/36, Dovetail, Fluid Fungicide
iprodione**	++++	4	dicarboxamide	26GT, IPro, Iprodione Pro, Raven
vinclozolin**	++++	4	dicarboxamide	Curalan, Touche
mancozeb**	++++	2	dithiocarbamate	Fore, 4 Flowable Mancozeb, Dithane, Mancozeb DG, Pentathlon, Protect, Wingman
mancozeb + myclobutanil**	++++	3	dithiocarbamate + DMI	Manhandle
mancozeb + copper hydroxide**	++++	2	dithiocarbamate + inorganic	Junction
azoxystrobin + propiconazole	++++	6	DMI + QoI	Headway
azoxystrobin	++++	6	QoI	Heritage
chlorothalonil + thiophanate-methyl**	+++	4	benzimidazole + nitrile	Spectro, ConSyst, Peregrine, Tee-1-Up, TM/C
chlorothalonil + propiconazole**	+++	3	DMI + nitrile	Concert
chlorothalonil + propiconazole + fludioxonil**	+++	2	DMI + nitrile + phenylpyrrole	Instrata
chlorothalonil**	+++	2	nitrile	Daconil, Chlorostar, Chlorothalonil, Echo, Legend, Manicure, Pegasus
pyraclostrobin	+++	6	QoI	Insignia
propiconazole	++	4	DMI	Banner MAXX, Kestrel, Kestrel MEX, ProPensity, Propiconazole, Propiconazole G-Pro, Propiconazole Pro, Savvi, Spectator, Strider
myclobutanil	+	4	DMI	Eagle, Myclobutanil
thiophanate-methyl	?	6	benzimidazole	3336, Fungo, Systec, T-Bird, T-Storm, Tee-Off, TM
flutolanil + thiophanate-methyl	?	6	benzimidazole + carboxamide	SysStar
tebuconazole**	?	4	DMI	Torque

Fungicide	Efficacy ⁽¹⁾	Resistance Risk ⁽²⁾	Class ⁽³⁾	Products ⁽⁴⁾
triticonazole	?	4	DMI	Trinity, Triton
triadimefon + trifloxystrobin	?	6	DMI + Qol	Armada, Tartan
fludioxonil	?	2	phenylpyrrole	Medallion
fluoxastrobin	?	6	Qol	Disarm, Disarm G
trifloxystrobin	?	6	Qol	Compass

** Not for application to residential lawns.

Footnotes:

(1) **Efficacy Codes:**

++++	excellent control when conditions are highly favorable for disease development
+++	good control when disease pressure is high, or excellent control when disease pressure is moderate
++	good control when disease pressure is moderate, excellent control when disease pressure is low
+	good control when disease pressure is low
0	does not provide adequate control under any conditions
?	cannot be rated due to insufficient data

(2) **Resistance Risk:**

- 1 Rotating and tank-mixing not necessary, but recommended to avoid potential side effects from continuous use of same chemical class.
- 2 Rotate to different chemical class after 3-4 applications; tank-mixing not necessary.
- 3 Rotate to different chemical class after 2-3 applications; tank-mixing not necessary.
- 4 Rotate to different chemical class after 1-2 applications; tank-mixing not necessary.
- 6 Rotate to different chemical class after 1-2 applications; tank-mixing with low or moderate risk product recommended.
- 9 Rotate to different chemical class after EVERY application; tank-mix with low or moderate risk product for EVERY application.

(3) Continual use of fungicides with similar control mechanisms (modes of action) can result in fungi that are resistant to some chemicals. Poor or ineffective disease control can be expected when this occurs. Managers can reduce the chances of this happening by mixing or alternating fungicides belonging to different chemical classes.

(4) Recommendations of specific chemicals are based upon information on the manufacturer's label and performance in a limited number of trials. Because environmental conditions and methods of application may vary widely, performance of the chemical will not always conform to the safety and pest control standards indicated by experimental data. When more than one brand name exists for an agricultural chemical, the name of brand that first came onto the market is listed first. Otherwise, brand names are listed in alphabetical order. The order in which brand names are given is not an indication of a recommendation or criticism.

Recommendations for the use of agricultural chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services does not imply endorsement by North Carolina State University or discrimination against similar products or services not mentioned. Other brand names may be labeled for use on turfgrasses. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label.

Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact your county's Cooperative Extension agent.

Useful links:

Glossary: <http://www.turffiles.ncsu.edu/Glossary.aspx>

Turf Diagnostics Lab: <http://ncstateturfdiagnostics.com/TDL/Home.html>

Turfgrass Disease Identification Program: <http://www.turffiles.ncsu.edu/diseaseID/>

Turfgrass Disease Management Program: <http://www.turffiles.ncsu.edu/diseasemgmt/>

Turf Irrigation Management System: <http://www.turffiles.ncsu.edu/tims/>

© North Carolina State University. This information sheet was prepared by Lane P. Tredway, Gail G. Wilkerson, Bridget R. Lassiter, Jenifer J. Reynolds, and Gregory S. Buol. Departments of Plant Pathology and Crop Science, College of Agriculture & Life Sciences, North Carolina State University. Prepared April 4, 2011. Available on-line at www.turffiles.ncsu.edu. This publication was made possible through a grant provided by the Center for Turfgrass Environmental Research & Education (CENTERE) whose purpose is to support worthwhile projects that will benefit both the private sector and the public, and protect the environment.