

Fungicide Recommendations for Turfgrass

The following list of fungicide recommendations is intended primarily for commercial applicators for preventative sprays to home or commercial turf.

Homeowner use of fungicides for lawn disease control is generally discouraged. Most products are safe for homeowners to use with precautions listed on their labels, but many will not be available for sale to homeowners. Management of diseases without the use of fungicides is highly recommended for home lawns. There are situations when fungicides are needed, but for most cases fungicides should be applied by lawn care professionals, not by the homeowner. If a disease is present at a level that the homeowner notices it is usually too late for a fungicide to be effective. Fungicides need to be applied preventatively (before disease occurs in most cases) to be effective. In addition, homeowners typically do not have the proper equipment to make an effective application to prevent diseases. If a disease occurs regularly, preventative spraying is recommended if the disease can kill the turf. Some diseases like brown patch just disfigure the lawn for a time. When the weather pattern changes that favored disease development the disease stops and the turf recovers without a fungicide. See fact sheet *PP6- Lawn Diseases- Identification and Management* for more information on other disease control strategies and identification of common diseases.

These disease control recommendations contain fungicides that have proven to be effective under Delaware conditions when used according to instructions on the manufacturer's label. Trade names appear for simplicity. No endorsement of such products, nor criticism of similar products not listed, is implied or intended. **Numbers within parentheses represent maximum recommended spray intervals.**

Algae and moss: Apply when they first appear. Repeat at 7-14 day intervals: mancozeb (7), Daconil (14), Pentathlon (7), or Thalonil (14).

Anthracnose: Apply when the disease first appears. Repeat at 10- to (*)-day intervals: Banner (28), Bayleton (28), Cleary 3336 (14), Daconil (14), Compass (21), Eagle (21), Heritage (28), Manicure (14), Medallion, Thalonil (14), Rubigan (28), or Sentinel (28), Spectro (14).

Brown patch: Apply between June 1 and September 15 at 7- to (*) intervals: Banner (14), Chipco 26019 (28), Cleary 3336 (14), Compass (28), Curalan (14), Daconil (14), Eagle (21), Fungo (14), Heritage (28), mancozeb (14), Manicure (14), Medallion, Prostar (21), Sentinel (28), Spectro (14), Thalonil (14), thiram (10), or Touche (14).

Dollar spot: apply between May 15 and October 15 at 7- to (*)-day intervals: Banner (28), Bayleton (28), Chipco 26019 (28), Curalan (28), Daconil (21), Eagle (28), Emerald, mancozeb (14), Manicure (21), Rubigan (28), Sentinel (28), Spectro (14), Thalonil (21), Touche (28), or Vorlan (28).

Fairy rings: We have not been successful in controlling fairy ring with chemicals. For best results, aerify affected areas, maintain adequate soil moisture, and apply nitrogen to mask symptom expression. Prostar and Heritage have proven to be effective fungicides against some species of fungi that cause fairy rings. Use according to the manufacturer's recommendations.

Gray leaf spot: Apply between July 15 and Oct 15 at 7- to (*)- day intervals: Banner (14), Chlorostar (21), Cleary 3336 (14), Compass (21), Daconil (10), Heritage (21), Manicure (10), Sentinel (28), or Spectro (14)

Leaf spot and melting-out: Apply when the grass starts to turn green in the spring. Repeat twice at 7- to (*)-day intervals: Chipco 26019 (28), Compass (21), Curalan (28), Daconil (21), Heritage (21), mancozeb (21), Manicure (21), Medallion, Thalonil (21), Touche (28), or Vorlan (28).

Necrotic ring spot: Apply Sept. to Nov. and April to June every 28 days as needed utilizing one of the following: Banner, Cleary 3336, Eagle, Fungo, Heritage, Rubigan, or Sentinel. Chemicals should be watered into the root zone for maximum effectiveness. Reapply thiophanate-methyl (Clearys 3336) every 14 days.

Powdery mildew: Apply between August 15 and October 15 at 10- to (*)-day intervals: Banner (28), Bayleton (28), Eagle (28), Rubigan (28), or Sentinel (28).

Pythium blight: Apply between June 15 and September 15 at 5- to(*)-day intervals: Aliette (14), Banol (21), Heritage (10), Koban (10), mancozeb (5), Prodigy (14), Subdue MAXX (21), Terraneb SP (7), or Terrazole (10). Apron may be used as a seed treatment to prevent damping-off. Mancozeb can be used to control this disease but is generally less effective than the products mentioned above.

Pythium root and crown rot: When the disease first appears, apply a contact fungicide such as Koban, mancozeb, or Terrazole in 5 to 10 gal of water. Irrigate the treated area immediately with 1/8 to 1/4 inches of water to ensure penetration into the soil. For best results, retreat the affected area within 5 to 7 days with an acropetal penetrant such as Aliette, Banol, Heritage, Prodigy, Quell, or Subdue Maxx. Chemicals should be watered into the root zone for maximum effectiveness.

Red thread: Apply when the daytime temperature in the spring stabilizes between 60 and 75° F. Repeat at 7- to (*)-day intervals: Banner (21), Bayleton (28), Chipco 26019 (14), Compass (21), Curalan (28), Eagle (14), Heritage (28), Rubigan (28), Sentinel (28), Touche (28), or Vorlan (21).

Rust: Apply between August 15 and October 15 at 7- to (*)-day intervals: Banner (28), Bayleton (28), Daconil (14), Eagle (14), mancozeb (14), Manicure (14), Sentinel (28), or Thalonil (14).

Slime molds: Mow off or rake out when they appear. General-purpose fungicides such as mancozeb may help reduce their appearance, but generally are not required.

Snow molds (Gray): Apply between November 15 and February 15. Repeat at 8-week intervals if necessary with Banner, Bayleton, Chipco 26019, Curalan, Daconil, Heritage, Manicure, PCNB++, Prostar, Rubigan, Sentinel, Teremec, Terraneb SP, Thalonil, or Touche.

Snow molds (Pink): Apply between November 15 and May 15. Repeat at 8-week intervals if necessary with Banner, Chipco 26019, Cleary 3336, Curalan, Fungo, Heritage, PCNB++, Spectro, Touche, or Vorlan.

Stripe smut: Either make one application of Banner, Bayleton, Cleary 3336, Eagle, Fungo, Rubigan, or Sentinel in mid-October; or apply in mid-May and then repeat 8 and 16 days later.

Summer patch (Fusarium blight syndrome): Apply in late-May, late-June and late-July in 4 to 5 gal water/1000 sq. ft for optimum control utilizing one of the following: Banner, Bayleton, Cleary 3336, Eagle, Fungo, Heritage, Rubigan, or Sentinel. Maintain soil pH at approx. 6.0. Chemicals must be watered into the root zone for maximum effectiveness.

These recommendations were adapted for Delaware from information supplied by Drs. Bruce Clark and Ann Gould, Rutgers University Cooperative Extension and is gratefully acknowledged.

Residential or Home Lawn Use.

As a result of the Food Quality Protection Act of 1996, the EPA has decided to curtail the use of fungicides containing chlorothalonil (Daconil and related products) and iprodione (Chipco 26019) on residential turf. Although current supplies of these materials may be sold and used on residential lawns, new product containing these restrictions on the label may not be applied to residential turf.

Homeowner packages of some fungicides listed above are available:

Spectracide Immunox Lawn Disease Control Granules- myclobutanil same as Eagle

Scott's Lawn Fungus Control Granules- thiophanate-methyl same as Cleary's 3336

Bonide Lawn Fungicide w/ Bayleton- triadimefon- same as Bayleton. Granules and liquid concentrate are available.

Common and Trade Names for Fungicides Frequently Used on Turf

COMMON NAME	TRADE NAME
azoxystrobin	Heritage 50WDG
boscalid	Emerald
chloroneb	Terraneb SP (65W), Proturf Fungicide V (6.2G), Twin Light Chloroneb (7.5G), Teremec 65SP
chloroneb and thiophanate-methyl	Proturf Fungicide IX
chlorothalonil	Daconil 2787 (90WDG, 4F), Thalonil (90DF, 4L), Daconil Ultrex 82.5SDG, Manicure (90DG, 4F), Daconil Weatherstik 6F, Echo 500 (4F), Lawn Fungicide (2.5G, 5G) Lesco Manicure T/O
chloronthalonil and fenarimol	Twosome 4F*
chlorothalonil and thiophanate-methyl	ConSyst
cyproconazole	Sentinel 40WG
etridiazole (ethazole)	Koban (30W, 1.3G), Terrazole (35W, 25E)
fenarimol	Rubigan (1AS, 50W)
fenarimol and chlorothalonil	Lesco TwoSome 4F
flutalonil	Prostar 50W
flutalonil and triadimefon	Prostar Plus 50W
fosetyl-Al	Aliette 80WDG, Aliette Signature 80WDG, Prodigy 80DG
iprodione	Chipco 26019 (50W), Chipco 26019 Flo 2F, Chipco 26GT 2F, Proturf Fungicide X (1.3G)
iprodione and thiophanate-methyl	Proturf Fluid Fungicide*
mancozeb	Fore (80W, 4F), Dithane (75DF, 4F, 80W, 80WSP), Mancozeb DG, Protect T/O 80WSB, 4 flowable Mancozeb 4F
mancozeb and metalaxyl	Pace 77W*
mefanoxam	Subdue MAXX 2ME, 1G, 2XWSP
myclobutanil	Eagle 40WSP
PCNB	Terraclor 75W, Turfcide 10G, Revere 75DG, Turfcide 400 4F, Penstar (75W, 10G), Penstar Flo 4F, FF II, Engage (75W, 10G), PCNB (2F, 10G, 75W)
propamocarb hydrochloride	Banol 6S
propiconazole	Banner 1.1E, Banner MAXX 1.24MC, Banner GL 41.8Gel
thiophanate-methyl	Cleary 3336 (4.5F, 2G, 50WSB), Fungo (50W, 4.5F), Proturf Systemic Fungicide (2.3G), Plant Disease Control
thiophanate-methyl and mancozeb	Duosan (80W, 80WSB)*
thiram	Spotrete (75 WDG, 4F), Thiram (75DG, 4F), Disease Stopper (10G)
triadimefon	Bayleton (25DF, 1G), Proturf Fungicide VII (0.6G), Disease Stopper Lawn and Turf Fungicide (1G), Granular Turf Fungicide (1G)
triadimefon and metalaxyl	Proturf Fluid Fungicide II*
triadimefon and thiram	Proturf Fluid Fungicide III*
trifloxystrobin	Compass
vinclozolin	Curalan (50DF, 4F), Touche 4F, Vorlan (50DF, 4F)

*Starred compounds contain a mixture of two fungicides.