

# Disease control guide:

## For warm-season disease control: know your turf!

South

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**D**iseases can seriously limit the successful culture of warm-season turfgrasses. Fungi are most of the living causal agents of disease in warm-season grasses, but nematodes are a problem, too, particularly in sandy soils.

Successfully managing diseases in warm-season grasses

depends on knowing the requirements of the particular grass in question, the biology of the pathogens, and good turf horticultural practices. Pesticide applications are valuable in an overall integrated pest management system, but they must be used responsibly.

### Brown patch

A major disease of cool-season grasses, brown patch also

commonly attacks warm-season grasses, including bermudagrass, St. Augustinegrass, centipedegrass and zoysiagrass. The primary causal agent is *Rhizoctonia solani*, but the strain which causes the disease differs from those encountered as pathogens of cool-season grasses.

Brown patch symptoms appear in the spring, as the turfgrass is breaking dormancy, or

in the fall, as the turfgrass approaches dormancy. Individual disease patches may be 20 or more feet in diameter. Shoots along the outer border of patches usually are yellow due to rotted leaf sheaths near the soil surface.

### Dollar spot

This disease occurs on all of the warm-season turfgrasses, but gets severe in bermudagrass

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and zoysiagrass. Best conditions for dollar spot are warm, humid weather. Dollar spot can be more severe on nitrogen-deficient turf or turf that has become drought stressed before rain or high humidities occur.

Symptoms differ depending on the grass's height of cut. On turf cut low, patches of about one to two inches in diameter develop. On higher-cut turf, patches may exceed five inches in diameter. Characteristic leaf lesions are a bleached tan with distinct reddish brown or purplish margins. Leaves may become girdled. In early morning, it is not uncommon to see a gray mycelial growth.

#### Spring dead spot

Spring dead spot of bermudagrass occurs in transition zone areas of the U.S. It is common in the Piedmont and mountain areas of the Carolinas and Georgia, but rare in the coastal regions. Hybrid bermudagrasses are particularly susceptible, but common types may also be afflicted. Several fungi probably cause this disease. All are relatively slow-growing, root-colonizing fungi.

Symptoms include dead circular areas of turf, two or three feet in diameter, found in spring as bermudagrass breaks dormancy. Patches of diseased turf may persist for several years. Older patches develop a "frog-eye" symptom with healthy grass in the center.

Generally, spring dead spot develops in turf that is three to six years old. Excessive thatch, late-summer nitrogen applications, and low temperatures in winter predispose turf to spring dead spot.

#### Gray leaf spot

Gray leaf spot is caused by *Pyricularia grisea*, a very common disease of St. Augustinegrass occurring in hot humid weather. It is more severe in new turf, in shady locations with poor air movement.

Infections occur on leaves and stolons, first as small brown spots with a distinct brown color, to a purple border around the infected tissue. Lesions may become very numerous and expand to completely consume leaves and girdle stolons. Severe infections may leave turf with a scorched appearance. The disease is sometimes called "blast" due to this symptom.

#### Leaf spot

*Bipolaris sorokiniana* causes leaf, crown and root diseases of bermudagrass and zoysiagrass during warm, wet weather in mid-summer. The diseases start as leaf spots, and may progress to crown and root rots. *Exserohilum rostrata* has been reported to cause a leaf spot of St. Augustinegrass and bermudagrass. However, these diseases are rarely severe where these grasses are cultured in open, sunny locations, with good soil drainage. If they occur, it may be a sign of other stresses to the turf that can be managed culturally.

On bermudagrass or zoysiagrass, small dark brown lesions appear on leaf blades and sheaths and may expand to larger, irregular, straw-colored lesions. Stolons and roots may develop a dark, or dry rot. The turf may brown and thin, over a period of weeks or months.

#### Pythium diseases

More of a problem in cool-

season grasses, some *Pythium* species cause general decline by infection of roots.

St. Augustinegrass is susceptible during prolonged warm, wet periods. Poor surface and subsurface drainage favors pythium fungi, and encourages algae in areas where disease has weakened the grass.

#### Fairy ring

Symptoms appear as rings or arcs of green, stimulated turf which may be accompanied by declining grass and mushroom formation. Problems develop when mushroom mycelia accumulate in the soil and dry it out.

Fairy rings may persist and increase in diameter over years.

The fungi may colonize old roots, stumps, or thatch, or may be mycorrhizal on living trees. Newly-constructed putting greens may develop infestations after only a few months or years.

#### Nematodes

Turf infested with damaging nematode species appears unthrifty; weeds invade weak or dead areas. Infested areas tend to wilt prematurely, even when adequate soil moisture is available. In most cases, nematodes occur in very sandy soils. **LM**

### CONTROL PRODUCTS FOR WARM-SEASON TURF DISEASES

<b>Brown patch</b>	Eagle WSP; Daconil 2787F; Daconil 90WDG; Daconil Ultrex; Prostar 50 WP; Bayleton 25 WP; Banner 14.3EC; Rubigan AS; Chipco 26019 50WP; Chipco 26019 23.3%F; Fore 37%F; Fore 80WP; Terraclor 75 WP; Turfside 10G; Curalan 41.3% F; Curalan DF; Cleary's 3336 50WP; Cleary's 3336 46%F; Sentinel 40WG
<b>Dollar spot</b>	Eagle WSP; Daconil 2787 F; Daconil 90WDG; Daconil Ultrex; Banner 14.3 EC; Bayleton 25WP; Curalan 50WP; Curalan DF; Rubigan AS; Chipco 26019 50WP; Chipco 26109; 23.3%F; Fore 80WP; Cleary's 3336 50WP; Cleary's 3336 46%F; Vorlan DF; Vorlan Flo; Sentinel 40WG
<b>Spring dead spot</b>	Rubigan AS; Eagle WSP
<b>Gray leaf spot</b>	Daconil 2787F; Daconil 90WDG; Daconil Ultrex; Banner 14.3%EC; Sentinel 40WG
<b>Leaf spot</b>	Daconil 2787F; Daconil 90WDG; Daconil Ultrex; Chipco 26019 50WP; Chipco 26019 23.3%F; Banner 14.3%EC; Curalan 50WP; Curalan Flo; Vorlan DF; Vorlan Flo; Fore 37%F; Fore 80WP; Eagle WSP
<b>Pythium diseases</b>	Aliette 80WP; Koban 30WP; Subdue 2E; Subdue 2G; Banol 6E
<b>Fairy rings</b>	Prostar 50WP
<b>Nematodes</b>	Mocap 10G; Nema-cur 10G; Nema-cur 3E

Note: each product has specific use rates and intervals. Read labels and follow specifications as listed on label.