

Disease	Cool Season Turf						Warm Season Turf	
	Bentgrass	Bluegrass			Fescue	Ryegrass	Bermudagrass	Kikuyugrass
	<i>A. paulustris</i>	<i>P. annua</i>	<i>P. reptans</i>	<i>P. trivialis</i>	<i>F. arundinacea</i>	<i>L. perenne</i>	<i>C. dactylon</i>	<i>P. clandestinum</i>
Anthracnose (BR)	+	+++	++	+	-	-	-	-
Anthracnose (FB)	-	+++	++	+	-	+	-	-
Bermuda Decline	-	-	-	-	-	-	++	-
Curvularia Blight and Leaf Spot	+	+	+	+	+	++	++	+
Cyanobacteria/Algae	+++	+++	-	+	-	-	-	-
Dollar Spot	+++	++	-	+	-	-	+	+
Fairy Ring	+++	+++	+++	+++	+++	+++	+++	+++
Fusarium Blight	-	-	+++	-	++	++	-	-
Grey Leaf Spot	-	-	-	-	-	+++	-	++
Helminthosporium Leaf Spot/Melting Out	-	-	++	-	+	+++	++	++
Kikuyugrass Decline	-	-	-	-	-	-	-	+++
Microdochium Patch	+	+++	-	-	-	+	-	-
Necrotic Ring Spot	-	++	+++	-	-	++	-	-
Pythium Blight	-	-	-	+++	+	+++	-	-
Pythium Root Rot (cool temp. species)	+	++	-	-	-	+	-	-
Pythium Root Rot (warm temp. species)	-	-	-	+++	+	+++	-	-
Rapid Blight	+	+++	-	++	-	+	-	-
Red Thread	-	-	-	-	++	+++	+	-
Rhizoctonia Blight on Cool Season Turfgrass	+	+	++	+	+++	+++	-	-
Rhizoctonia Blight on Warm Season Turfgrass	-	-	-	-	-	-	++	+++
Rust	-	-	+++	-	+++	+++	-	-
Smut	-	-	-	-	-	-	+	-
Southern Blight	+	+	++	-	++	++	-	-
Spring Dead Spot	-	-	-	-	-	-	+++	-
Summer Patch	+	+++	+++	+	-	++	-	-
Take-All Patch	+++	+	+	-	-	++	-	-
Yellow Patch	+	+++	-	+	-	+	-	-

notes: (+++) very common
 (++) occasional, (+) rare
 (-) very rare or not seen

Temperature Ranges of Common Diseases of Turf in Southern California

Disease	Air Temp. (°F)*			Soil Temp. (°F)**			Special Conditions
	low	opt	hi	low	opt	hi	
Anthracnose (Basal)	60	-	75	-	-	-	favored by low N-fertility, high compaction & drought; extended periods of leaf wetness contribute to the development of the disease, as do practices that cause mechanical damage to the turf (top dressing and verticutting)
Anthracnose (Foliar)	85	-	95	-	-	-	
Bermuda Decline	-	-	-	50	-	65	similar to spring dead spot, although actively growing grass can be affected in warm, wet conditions
Curvularia Blight and Leaf Spot	85	-	95	-	-	-	several consecutive days in temperature range combined with extended periods of leaf wetness; primarily a stress pathogen that attacks low fertility and heat and drought stressed plants
Cyanobacteria/Algae	-	60-80	-	-	-	-	common in cool, wet weather; favored by high organic matter
Dollar Spot	60	70	80	-	-	-	excessive leaf wetness and fog contribute to disease development as do water stress and excess thatch development; more severe on low N-fertility
Fairy Ring	-	-	-	-	-	-	a dense thatch layer contributes to the disease as well as low fertility and insufficient irrigation
Fusarium Blight	80	-	95	-	-	-	drought stress followed by overwatering; night air temperatures above 70°F
Grey Leaf Spot	70	-	85	-	-	-	long periods of leaf wetness, high N-fertility
Helminthosporium Leaf Spot/Melting Out	68	-	95	-	-	-	long periods of leaf wetness, when at higher air temperatures, shorter periods of leaf wetness are required for high incidence; more serious under high nitrogen fertilization; leaf
Kikuyugrass Decline	50	-	60	50	-	65	infection may occur during the early spring or late fall, but sever damage and death may not develop until hot, dry weather; more severe when pH of the top inch of soil is above 6.5, common in low Mn-fertility locations
Microdochium Patch	-	32-45	65	-	-	-	severity increases at soil pH greater than 6.5, needs high canopy moisture, more severe with high N-fertility
Necrotic Ring Spot	50	-	60	-	-	-	favored by cool, wet conditions in spring and early fall; drought stress and high compaction can intensify symptoms later in the season
Pythium Blight	68	85-95	100+	-	-	-	severe outbreaks when day temp is 86°F or greater, night temp of 68°F or greater, with 15
Pythium Root Rot (cool temp. species)	55	-	70	-	-	-	high salt concentration in the soil and thatch; high soil moisture levels
Pythium Root Rot (warm temp. species)	86	-	-	-	-	-	high salt concentration in the soil and thatch; high soil moisture levels
Rapid Blight	68	75-81	86	-	-	-	outbreaks associated with dry periods in the fall and spring; dry weather increases soluble salts in the soil and plants, increasing the susceptibility of cool-season turfgrasses to infection and symptom expression, TDS meter > 0.4

* max. daytime temperature
 ** soil temp. at 4-in. depth
 (-) unknown or not available

Temperature Ranges of Common Diseases of Turf in Southern California

Disease	Air Temp. (°F)*			Soil Temp. (°F)**			Special Conditions
	low	opt	hi	low	opt	hi	
Red Thread	65	-	75	-	-	-	long periods of leaf wetness, low N-fertility
Rhizoctonia Blight on Cool Season Turfgrass	75	85-90	95	-	-	-	high air temp in conjunction with extended periods of leaf wetness, more severe with high N-fertility
Rhizoctonia Blight on Warm Season Turfgrass	65	-	75	50	-	65	in late fall/early winter or early spring, as plants go in and out of dormancy; major outbreaks
Rust	85	-	95	-	-	-	night temp between 70-75°F with high atmospheric humidity; a slow drying of leaf surfaces during the day
Smut	60	-	78	-	-	-	wet, humid conditions
Southern Blight	75	-	95	-	-	-	moist, but not excessively wet, thatch is needed; low soil pH favors disease
Spring Dead Spot	-	-	-	50	-	65	infection occurs the previous summer or early fall when air temps are 70-75°F; damage
Summer Patch	85	-	95	65	-	70	turfgrasses with restricted root systems are more prone to severe outbreaks; severity is usually greater at high soil moisture levels
Take-All Patch	50	-	60	50	-	65	infection may occur during the early spring or late fall, but severe damage and death may not develop until hot, dry weather; more severe when pH of the top inch of soil is above 6.5
Yellow Patch	45	50-65	75	-	-	-	foliar blighting will occur with periods of extended rainfall and temperatures in the optimal range

* max. daytime temperature
 ** soil temp. at 4-in. depth
 (-) unknown or not available

University of California Turf Disease Sample Information Sheet



Date: _____

Contact Information and Course Location:

name _____

company _____

address _____

city, state, zip _____

phone _____ fax _____ cell phone _____ e-mail _____

Sample Information

Turf Species and Variety: _____

Location: green tee fairway rough other

Age of Turf: mature newly seeded newly sodded newly sprigged

Mowing Height: _____ inches

Irrigation Frequency: _____ (times per week) _____ (inches of water)

Soil Salinity (TDS-4 reading): _____

Date and Amount of Last two Fertility Applications: _____

Symptoms

Type (check all that apply)

- | | | | |
|------------------------------------|---------------------------------------|------------------------------------|---------------------------------------|
| <input type="checkbox"/> blight | <input type="checkbox"/> greasy | <input type="checkbox"/> chlorotic | <input type="checkbox"/> other: _____ |
| <input type="checkbox"/> dieback | <input type="checkbox"/> water soaked | <input type="checkbox"/> wilted | _____ |
| <input type="checkbox"/> leaf spot | <input type="checkbox"/> matted thin | <input type="checkbox"/> stunted | |

Color (check all that apply)

- | | | | |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------------|
| <input type="checkbox"/> black | <input type="checkbox"/> gray | <input type="checkbox"/> purple | <input type="checkbox"/> white |
| <input type="checkbox"/> bronze | <input type="checkbox"/> green | <input type="checkbox"/> red | <input type="checkbox"/> yellow |
| <input type="checkbox"/> brown | <input type="checkbox"/> orange | <input type="checkbox"/> tan | <input type="checkbox"/> other: _____ |

Pattern (check all that apply)

- | | | | |
|----------------------------------|----------------------------------|------------------------------------|---------------------------------------|
| <input type="checkbox"/> spots | <input type="checkbox"/> patches | <input type="checkbox"/> irregular | <input type="checkbox"/> streaks |
| <input type="checkbox"/> circles | <input type="checkbox"/> rings | <input type="checkbox"/> uniform | <input type="checkbox"/> other: _____ |

Specific areas (check all that apply)

- | | | | |
|---|--|-------------------------------------|--|
| <input type="checkbox"/> wet spots | <input type="checkbox"/> excess thatch | <input type="checkbox"/> high areas | <input type="checkbox"/> clean up passes |
| <input type="checkbox"/> dry spots | <input type="checkbox"/> shade | <input type="checkbox"/> edges | <input type="checkbox"/> other: _____ |
| <input type="checkbox"/> compacted soil | <input type="checkbox"/> full sun | <input type="checkbox"/> slopes | |
| <input type="checkbox"/> high traffic | <input type="checkbox"/> low areas | | |

Typical size: _____ in/ft to _____ in/ft

Distribution: localized random widespread

Signs (hand lense or microscope)

- | | | |
|--------------------------------------|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> acervuli | <input type="checkbox"/> ETRI | <input type="checkbox"/> root rot |
| <input type="checkbox"/> crown rot | <input type="checkbox"/> light spores | <input type="checkbox"/> sporodochia |
| <input type="checkbox"/> dark spores | <input type="checkbox"/> mycelia | <input type="checkbox"/> other: _____ |

Previous Control

Fungicides applied in the last two weeks: _____

Other chemicals applied in the last two weeks: _____