Key Soil and Daily Air Temperatures for Weed Seed Germination and Fungal Disease Infection

COOL SEASON				
Fungal Diseases		Additional Notes		
Brown Patch	>60° nighttime temps	10-12 hours continual leaf wetness.		
Dollar Spot	>50° nighttime temps	10-12 hours continual leaf wetness.		
Fairy Ring	mean daily soil temps >55°	Fungicides watered in - surfactant helps		
Leaf Spot	60°-65° daily temps	Slowly growing turf, regardless of reason.		
Pythium Blight	>65° nighttime temps and also >85° daytime temps	12-14 hours continual leaf wetness.		
Pythium Root Dysfunction	mean daily soil temps between 50° and 75°	Infects in Fall and Spring, symptoms don't appear until times of stress (Summer)		
Pythium Root Rot	Any time of year	Saturated soil for several days or weeks		
Summer Patch	>65° soil temps	Symptoms appear mid-summer as stresses mount		

Fungal Diseases		Additional Notes
Leaf and Sheath Blight (Mini Ring)	83°-97° daily temps	Low fertility helps development and slows recovery.
Dollar Spot	>50° nighttime temps	10-12 hours continual leaf wetness.
Fairy Ring	mean daily soil temps >55°	Fungicides watered in - surfactant helps
Leaf Spot	60°-65° daily temps	Slowly growing turf, regardless of reason.
Pythium Blight	>50° nighttime temps	12-14 hours continual leaf wetness.
Large Patch	70° soil temp	Cool, wet weather in fall
Pythium Root Rot	Any time of year	Saturated soil for several days or weeks
Spring Dead Spot	Between 60° and 80° soil temp	Preventive applications within the temperature zone should occur on 21-28 day intervals in high water volumes or watered in.
Take-all Root Rot	77°-86° soil temp	Symptoms develop in late Summer/Fall and through Winter and Spring if preventive fungicide apps aren't timed in the temperature range and watered in.

WARM SEASON





WEED SEED GERMINATION - SPRING

53°-58°	Large and Smooth Crabgrass	Soil surface moisture fluctuations around the proper temperature timing hastens germination.
60°-65°	Goosegrass	Soil surface moisture and temperature fluctuations accompanied by sunlight (thin or tightly mowed turf) around the proper temperature timing hastens germination.

WEED SEED GERMINATION - FALL

</= 70° Poa annua

Frequent irrigation and/or rainfall around the proper temperature hastens germination.



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