

Table 22. Commonly used turf fungicides and the diseases they are labeled to control or suppress.

FRAC ¹	Fungicide	Algae	Anthracoze	Bentgrass Dead Spot	Brown Patch	Brown Ring Patch (Waitea Patch)	Copper Spot	Damping-off, Seed Rot	Dollar Spot	Downy Mildew (Yellow Tuft)	Fairy Rings	Gray Leaf Spot	Leaf Smuts	Leaf Spots/Blight/Melting out	Microdochium Patch	Necrotic Ring Spot	Powdery Mildew	Pythium Blight	Pythium Root Dysfunction	Pythium Root Rot	Red Thread or Pink Patch	Rusts	Slime Molds	Summer Patch	Take-All Patch	Typhula Blight	Yellow Patch (Cool Weather Brown Patch)
11	azoxystrobin		X		X						X	X		X	X	X	X	X	X		X	X	X	X	X	X	X
7	boscalid			X					X																		
M4	captan				X									X													
14	chloroneb				X			X										X	X	X							X
M5	chlorothalonil ²	X	X		X		X	X				X		X	X						X	X					X
21	cyazofamid							X										X	X	X							
14	ethazole (etridiazole)							X										X	X	X							
29	fluazinam	X	X		X				X					X	X						X	X					X
12	fludioxonil		X	X	X	X						X		X	X									X			X
11	fluoxastrobin		X	X	X				X		X	X		X	X		X	X			X	X		X	X	X	
7	flutolanil				X						X										X						X
7	fluxapyroxad	X			X				X					X										X			X
33	fosetyl-Al									X								X	X	X							
2	iprodione				X				X					X	X	X					X						X
7	isofetamid								X																		
M3	mancozeb	X			X	X	X	X				X		X	X			X			X	X	X				
M3	maneb	X			X	X	X	X						X	X			X			X						
11	mandestrobin				X				X		X											X			X		
4	mefenoxam							X		X								X	X	X							
4	metalaxyl							X										X	X	X							
3	metconazole		X		X	X	X		X		X	X	X	X	X	X					X		X	X	X	X	X
3	myclobutanil		X		X	X			X				X	X	X	X	X				X	X	X	X	X	X	
14	PCNB				X				X					X	X												X
7	penthiopyrad		X		X				X					X			X				X	X					X
33	phosphite (salts) ³																	X									
19	polyoxin D zinc salt		X		X	X					X	X		X	X		X				X						X
28	propamocarb							X										X	X	X							
3	propiconazole		X		X				X		X	X	X	X	X	X	X				X	X	X	X	X	X	X
11	pyraclostrobin		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	
3	tebuconazole		X		X				X		X	X	X	X	X	X	X				X	X		X	X	X	X
1	thiophanate-methyl		X	X	X	X	X		X			X	X	X	X	X	X				X	X		X	X		X
M3	thiram				X		X		X					X	X						X	X					X
3	triadimefon		X		X		X		X		X	X		X		X					X	X		X	X	X	
11	trifloxystrobin		X		X						X			X	X				X		X	X		X			
3	triticonazole ⁴		X		X	X			X					X	X	X					X	X		X	X	X	X
2	vinclozolin				X				X					X	X						X			X			X

Table 22. Continued...

FRAC ¹	Pre-Mixed Products	Algae	Anthraco-nose (Crown/Basal Rot)	Bentgrass Dead Spot	Brown Patch	Brown Ring Patch (Waitea Patch)	Copper Spot	Damping-off, Seed Rot	Dollar Spot	Downy Mildew (Yellow Tuft)	Fairy Rings	Fusarium Blight/Crown & Root	Gray Leaf Spot	Leaf Smuts	Leaf Spots/Blights/Melting out	Microdochium Patch	Necrotic Ring Spot	Powdery Mildew	Pythium Blight	Pythium Root Dysfunction	Pythium Root Rot	Red Thread or Pink Patch	Rusts	Slime Molds	Summer Patch	Take-All Patch	Typhula Blight	Yellow Patch (Cool Weather Brown Patch)
11 + M5	azoxystrobin + chlorothalonil ²	X	X		X		X		X				X		X	X						X	X					X
11 + 3	azoxystrobin + difenoconazole		X	X	X			X		X		X	X	X	X	X	X	X				X	X		X	X	X	X
11 + 3	azoxystrobin + propiconazole		X	X	X			X		X		X	X	X	X	X	X	X				X	X		X	X		X
7 + 3	Benzovindiuflupyr + difenconazole															X											X	
M5 + P1	chlorothalonil ² + acibenzolar-S-methyl	X	X		X		X		X			X		X	X							X	X				X	
M5 + 3	chlorothalonil ² + propiconazole		X		X		X		X			X	X	X				X				X	X		X			
M5 + 1	chlorothalonil ² + thiophanate-methyl	X	X	X	X		X		X	X		X	X	X	X		X					X	X				X	X
M5 + 12 + 3	chlorothalonil ² + fludioxonil + propiconazole		X		X			X				X		X	X							X	X		X		X	X
M5 + 3 + 2 + 1	chlorothalonil ² + tebuconazole + iprodione + thiophanate-methyl		X		X			X				X	X	X		X	X					X			X		X	
7 + 11	Fluopyram + trifloxystrobin		X		X				X			X				X						X	X					X
11 + M5	fluoxastrobin + chlorothalonil ²	X	X	X	X		X		X	X	X		X		X	X		X	X			X	X		X	X	X	X
11 + 3	Fluoxastrobin + tebuconazole		X	X	X		X		X	X	X	X	X		X	X		X	X			X	X		X	X	X	X
7+ 11	fluxapyroxad + pyraclostrobin		X	X	X	X		X		X		X		X	X	X	X	X	X	X		X	X		X	X	X	
2 + 11	iprodione + trifloxystrobin		X		X			X				X		X	X	X						X	X				X	
M3 + M1	mancozeb + copper hydroxide	X			X		X		X					X	X		X	X				X	X					
M3 + 3	mancozeb + myclobutanil	X	X		X		X		X			X	X	X	X		X	X				X	X		X		X	
28 + 43	propamocarb + fluopicolide							X											X	X	X							
11 + 7	pyraclostrobin + boscalid		X	X	X		X		X	X	X	X	X		X	X	X	X	X	X		X	X		X	X	X	
11 + 3	pyraclostrobin + triticonazole ⁴									X					X		X	X				X	X		X	X		

Table 22. Continued...

FRAC ¹	Pre-Mixed Products	Algae	Anthrachnose (Crown/Basal Rot)	Bentgrass Dead Spot	Brown Patch	Brown Ring Patch (Waitea Patch)	Copper Spot	Damping-off, Seed Rot	Dollar Spot	Downy Mildew (Yellow Tuft)	Fairy Rings	Fusarium Blight/Crown & Root	Gray Leaf Spot	Leaf Smuts	Leaf Spots/Blights/Melting out	Microdochium Patch	Necrotic Ring Spot	Powdery Mildew	Pythium Blight	Pythium Root Dysfunction	Pythium Root Rot	Red Thread or Pink Patch	Rusts	Slime Molds	Summer Patch	Take-All Patch	Typhula Blight	Yellow Patch (Cool Weather Brown Patch)	
1 + 14	thiophanate-methyl + chloroneb				X		X		X							X			X									X	
1 + 12	thiophanate-methyl + flutolanil		X		X		X		X				X		X	X						X						X	X
1 + 2	thiophanate-methyl + iprodione		X		X			X						X	X														
1 + M3	thiophanate-methyl + mancozeb				X			X					X		X														
3 + 7	triadimefon + flutolanil				X			X										X			X	X					X		
3 + 11	triadimefon + trifloxystrobin		X		X			X					X		X	X					X	X		X					
3 + 11 + ?	triadimefon + trifloxystrobin + stress guard		X		X			X					X	X	X	X					X	X		X					

¹ Fungicide Resistance Action Committee Codes (FRAC): fungicides with the same FRAC code have the same mode of action. M-codes indicate multi-site chemicals with low risk of resistance development. P-code indicates host plant defense induction.

² Use of chlorothalonil is regulated in Massachusetts under the Public Drinking Water Supply protection regulations, see the Pesticide Regulations section of this guide for details.

³ Phosphite (salts) is also commonly referred to as phosphorus acid or phosphonate.

⁴ Use of triticonazole is regulated in Massachusetts under the Public Drinking Water Supply protection regulations, see the Pesticide Regulations section of this guide for details.

This information has been prepared partially based on M. Bess Dicklow, University of Massachusetts-Amherst. 2006. "Commonly used turfgrass fungicides and diseases they control" and Vincelli, P. and G. Munshaw, University of Kentucky. 2013. "Chemical control of turfgrass diseases 2013."