

## TURF DISEASES (Commercial)

Wendell Hutchens and Terry Spurlock

Disease	Product	Active Ingredient	FRAC Code	Rate/1,000 sq ft	Comments
Brown Patch	Heritage 50 WG	azoxystrobin	11	0.2 - 0.4 oz	Apply in 2 - 4 gals water/1,000 sq ft every 14 - 28 days as a preventative during warm, humid weather favorable for the disease. Use the higher rate and shorter interval if disease is evident and conditions are very favorable.
	Insignia 20 WG	pyraclostrobin	11	0.5 - 0.9 oz	
	Compass 50 WG	trifloxystrobin	11	0.15 - 0.25 oz	14 day interval at first sign of disease.
	Renown 5.16 SCII	chlorothalonil + azoxystrobin	M5 + 11	2.5 - 4.5 oz	Apply at a 14 - 21 day interval. Commercial use only.
	Endorse 2.5 WP	polyoxin D	19	4 oz	Apply in a minimum of 0.5 gal/1,000 sq ft. Repeat on a 7 - 14 day interval as needed.
	Medallion 50 WP	fludioxonil	12	0.25 - 0.5 oz	Begin applications before disease development and repeat on 7 - 14 day intervals. May be used with Banner Maxx for extended control of various leaf spots.
	Daconil WeatherStik 6 F	chlorothalonil	M5	3 - 7 fl oz	Apply in 2 - 5 gals water/1,000 sq ft at 7 - 10 day intervals as a preventative (before disease is noticed). Use high rate on 7 day schedule once disease is evident. See label for fairway rates. Commercial use only.
	Daconil Ultrex 82.5 SDG	chlorothalonil	M5	1.8 - 3.25 oz	Protectant qualities. Commercial use only.
	Chipco 26019 50 W	iprodione	2	1.5 - 2 oz	Apply in 2 - 5 gal water/1,000 sq ft at 14 - 21 day intervals as a preventative. See label for restrictions. Iprodione is for commercial use only.
	Eagle 40 WSP	myclobutanil	3	0.6 - 1.2 oz	
	Fore Rainshield 80 WP	mancozeb	M3	4 - 8 oz	Apply in 3 - 5 gals water/1,000 sq ft every 7 - 14 days as a preventative. A non-ionic surfactant should be used. Use 7 day interval if disease is severe.
	Banner MAXX 1.3 EC	propiconazole	3	1 - 2 fl oz	Apply in 2 - 5 gals water/1,000 sq ft at 7 - 21 day intervals as a preventative. Can be tank-mixed with certain contact fungicides – see label for details. <b>Do not exceed 2 fl oz rate on bermudagrass and St. Augustinegrass.</b>
	Concert II 4.3 SE	propiconazole + chlorothalonil	3 + M5	3 - 5.5 oz	Begin applications in May or June before disease is present. Commercial use only.
	Spectro 90 WDG	chlorothalonil + thiophanate-methyl	M5 + 1	3 - 8 oz	Best applied when conditions favor disease. Repeat as needed at 14 - 21 days as indicated on label. Commercial use only.

(continued)

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Brown Patch (cont.)	Cleary's 3336 F 4 F	thiophanate-methyl	1	2 - 4 oz	Apply in 3 - 5 gals water/1,000 sq ft every 7 - 14 days at first sign of disease.
	26/36 Fungicide 3.8 F	iprodione + thiophanate-methyl	2 + 1	2 - 4 oz	Iprodione is for commercial use only.
	Secure 0.88 EC	fluzinam	29	0.5 oz	Commercial use only.
	Prostar 70 WP	flutolanil	7	2 - 3 oz	Apply in 2 - 5 gals water at first sign of disease with a non-ionic surfactant. Repeat as needed every 14 - 21 days.
	Bayleton 50 WSP	triadimefon	3	0.5 - 1 oz	
	Tartan 9.85 L	trifloxystrobin + triadimefon	11 + 3	1 - 2 oz	Begin applications prior to or in early stages of disease onset. 14 - 28 day interval.
	Rhapsody 68 WG	<i>Bacillus subtilis</i>	44	2 - 10 oz	Apply in 2 gal/1,000 sq ft. Apply when conditions are conducive for disease. May be used in organic production.
Dollar Spot	Daconil WeatherStik 6 F	chlorothalonil	M5	3 - 7 fl oz	Apply in 2 - 5 gals water/1,000 sq ft at 7 - 10 day intervals as a preventative (before disease is noticed). Use high rate on 7 day schedule once disease is evident. See label for fairway rates. Commercial use only.
	Daconil Action 6.11 F	chlorothalonil + acibenzolar-S-methyl	M5 + P1	1 - 3.5 fl oz	See label restrictions. Commercial use only.
	Chipco 26019 50 W	iprodione	2	1.5 - 2 oz	Apply in 2 - 5 gals water/1,000 sq ft at 14 - 21 day intervals as a preventative. See labels for restrictions. Iprodione is Commercial use only.
	Eagle 40 WSP	myclobutanil	3	0.6 - 1.2 oz	
	Fore Rainshield 80 WP	mancozeb	M3	4 - 8 oz	Apply in 3 - 5 gals water/1,000 sq ft every 7 - 14 days as a preventative. A non-ionic surfactant should be used. Use 7 day interval if disease is severe.
	Banner MAXX 1.3 EC	propiconazole	3	1 - 2 fl oz	Apply in 2 - 5 gals water/1,000 sq ft at 7 - 21 day intervals as a preventative. <b>Can be tank-mixed with certain contact fungicides – see label for details. Do not exceed 2 fl oz rate on bermudagrass or St. Augustine grass.</b>
	Spectro 90 WDG	chlorothalonil + thiophanate-methyl	M5 + 1	3 - 8 oz	Best applied when conditions favor disease. Repeat as needed at 14 - 21 days as indicated on label. Commercial use only.
	Cleary's 3336 F 4 F	thiophanate-methyl	1	2 - 4 oz	Apply in 3 - 5 gals water/1,000 sq ft every 7 - 14 days at first sign of disease.
	(continued)	Insignia 20 WG	pyraclostrobin	11	0.9 oz

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Dollar Spot (cont.)	Tartan 9.85 L	trifloxystrobin + triadimefon	11 + 3	1 - 2 oz	Begin applications prior to or in early stages of disease onset. Apply at a 14 - 28 day intervals.
	Emerald 70 WDG	boscalid	7	0.13 - 0.18 oz	Begin applications prior to or in early stages of disease onset. Apply at a 14 - 28 day intervals.
	Trinity 2.21 SE	triticonazole	3	0.5 - 2 oz	See label. Apply in 1 - 5 gals/1,000 sq ft.
	Rhapsody 68 WG	<i>Bacillus subtilis</i>	44	2 - 10 oz	2 gal/1,000 sq ft. Begin when conditions are conducive for disease. May be used for organic production.
	Junction 61.1 DF	mancozeb + copper hydroxide	M3 + M1	2 - 4 oz	Begin at disease onset, then at 5 day intervals. See label.
	Secure 0.88 EC	fluzinam	29	0.5 oz	Commercial use only.
Rhizoctonia Large Patch (zoysia and bermuda)	Heritage 50 WG	azoxystrobin	11	0.4 oz	Apply in 2 - 5 gals water/1,000 sq ft between September 10 and October 10 and again between March 15 and April 15. In very severe instances, an additional application may be made about 4 weeks after the first fall application.
	Prostar 70 WP	flutolanil	7	3 oz	
	Eagle 40 WSP	myclobutanil	3	1.2 oz	
	Trinity 2.21 SE	triticonazole	3	0.5 - 2 oz	
	Bayleton 50 WSP	triadimefon	3	1 oz	
Fairy Ring (suppression)	Prostar 70 WP	flutolanil	7	2.2 - 4.5 oz	Apply in 3 - 5 gals water/1,000 sq ft at first sign of disease and repeat in 28 days if necessary. Apply as soon as possible after initial symptoms. Reapply after 28 days if needed.
	Heritage 50 WG	azoxystrobin	11	0.4 oz	
	Insignia 20 WG	pyraclostrobin	11	0.9 oz	
	Headway 1.39 EC	azoxystrobin + propiconazole	11 + 3	3 oz	Apply at 4 gals/1,000 sq ft at first disease evidence.
	Tourney 1.15 WDG	metconazole	3	0.37 oz	Apply at 4 gals/1,000 sq ft. Reapply at 21 days.
	Affirm 11 WDG	polyoxin D zinc salt	19	1 oz	Use 2 - 3 applications at 7 day intervals with a wetting agent.
	Pillar G 0.81 G	pyraclostrobin + triticonazole	3 + 11	3 lbs	Use at 14 - 28 day intervals with a wetting agent.
	Torque 50 WDG	tebuconazole	3	0.6 oz	66 - 132 GPA water volume. See label directions.

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Pythium Blight (also Pythium Root and Crown Rots)	Heritage 50 WG	azoxystrobin	11	0.4 oz	Apply in 2 - 4 gals water/1,000 sq ft every 10 - 14 days as a preventative. Use the 10 day interval during prolonged hot, wet weather. Do not make more than 2 sequential applications.
	Terrazole 35 WP	etridiazole	14	2 - 4.5 oz	Apply to established turf in 5 gals water/1,000 sq ft every 5 - 10 days as a preventative. Water in immediately.
	fosetyl-AI (various trade names 80 WDG)	fosetyl-AI	33	4 - 8 oz	Apply in 5 gals water/1,000 sq ft every 5 - 10 days at the first sign of disease and when conditions favor the disease. See label for tank-mixing suggestions.
	Fore Rainshield 80 W	mancozeb	M3	8 oz	Apply in 1 - 5 gals water/1,000 sq ft every 14 - 21 days as a preventative when hot, wet conditions persist. Use high rate and 14 day interval when disease is present. Allow foliage to dry before watering or mowing.
	Subdue MAXX 40 WP	mefenoxam	4	0.5 - 1 fl oz	Apply to established turf every 10 - 21 days in 3 - 5 gals water/1,000 sq ft as a preventative during hot, wet weather. See label for tank mix information.
	Banol 66.5 L	propamocarb	28	1.33 - 4 fl oz	Apply in 2 - 5 gals water/1,000 sq ft every 7 - 21 days as a preventative during hot, wet weather.
	Alude 6.27 SC	salts of phosphorus acid	33	5 - 10 oz	Apply at 14 - 21 day intervals.
	Junction 61.1 DF	mancozeb + copper hydroxide	M3 + M1	2 - 4 oz	Begin at disease onset, then at 5 day intervals.
	Stellar 2.08 SC	fluopicolide + propamocarb	43 + 28	1.2 fl oz	Apply when conditions favor disease development.
Leaf Rust Gray Leaf Spot (St. Augustinegrass, ryegrass, tall fescue)	Heritage 50 WG	azoxystrobin	11	0.2 - 0.4 oz	Apply at first sign of disease and repeat every 2 - 4 weeks until conditions become less favorable.
	Compass 50 WG	trifloxystrobin	11	0.15 - 0.25 oz	
	Banner MAXX 1.3 EC	propiconazole	3	2 - 4 fl oz	Apply as above but on a 2 - 3 week schedule.
	Bayleton 50 WSP	triadimefon	3	0.5 - 1 oz	Apply at first sign of disease, then at 14 day intervals.
	Torque 50 WDG	tebuconazole	3	0.6 - 1.1 fl oz	See label.
	Insignia 20 WG	pyraclostrobin	11	0.5 - 0.9 oz	Apply when conditions are favorable for disease. 14 - 28 day intervals. See label.
	Eagle 40 WSP	myclobutanil	3	1.2 oz	See label.

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Leaf Spots	Heritage 50 WG	azoxystrobin	11	0.2 - 0.4 oz	Apply at first sign of disease and repeat every 2 - 4 weeks until conditions become less favorable.	
	Compass 50 WG	trifloxystrobin	11	0.15 - 0.25 oz		
	Insignia 20 WG	pyraclostrobin	11	0.5 - 0.9 oz		
	Fore Rainshield 80 WP	mancozeb	M3	4 oz		Apply as above but on a 1 - 2 week schedule.
	Banner MAXX	propiconazole	3	2 - 4 fl oz		Apply as above but on a 2 - 3 week schedule.
	Chipco 26019 50 WP	iprodione	2	2 oz		Apply as above but on a 2 - 3 week schedule. Commercial use only.
	Eagle 40 WSP	myclobutanil	3	0.6 oz		
Spring Dead Spot (bermuda only; provides suppression)	Heritage 50 WG	azoxystrobin	11	0.4 oz	Make one application in early fall (two if disease history is very severe) in 2 - 4 gals water/1,000 sq ft.	
	Eagle 40 WSP	myclobutanil	3	1.2 oz		
	Disarm 480 SC	fluoxastrobin	11	0.36 oz		Apply 1 - 2 months before dormancy. Irrigate 0.25 - 0.50 in. after application.
	ProPensity 1.3 ME	propiconazole	3	4 oz		Use 1 - 3 applications beginning Sep/Oct.
	Torque 50 WDG	tebuconazole	3	0.6 oz		For prevention. Apply in fall and spring.
Summer Patch	Heritage 50 WG	azoxystrobin	11	0.4 oz	Apply two applications in the fall and two in early spring at 28 day intervals. Apply in 2 - 4 gal water/1,000 sq ft.	
	Compass 50 WG	trifloxystrobin	11	0.25 oz		
	Eagle 40 WSP	myclobutanil	3	0.6 - 1.2 oz		
	Insignia 20 WG	pyraclostrobin	11	0.5 - 0.9 oz		
Take-All Patch	Heritage 50 WG	azoxystrobin	11	0.4 oz	Apply two applications in the fall and two in early spring at 28 day intervals. Apply in 2 - 4 gals water/1,000 sq ft.	
	Eagle 40 WSP	myclobutanil	3	1.2 oz		
	Insignia 20 WDG	pyraclostrobin	11	0.9 oz		
	Disarm 480 SC	fluoxastrobin	11	0.36 oz		Apply at 28 day intervals.
	Torque 50 WDG	tebuconazole	3	0.6 oz		For prevention. Apply in fall and spring.

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Yellow Patch (cool season brown patch)	Heritage 50 WG	azoxystrobin	11	0.2 - 0.4 oz	Apply one application in late fall (two at 28 day intervals if severe disease history).
	Prostar 70 WP	flutolanil	7	1.5 oz	Apply at first sign of disease and repeat as needed.
	Daconil 2787 4 F	chlorothalonil	M5	3 - 11 fl oz	Apply at first sign of disease and repeat as needed. Commercial use only
	Daconil 2787 90 WDG	chlorothalonil	M5	1.75 - 6.5 oz	Apply at first sign of disease and repeat as needed. Commercial use only.
	Daconil Ultrex 82.5 SDG	chlorothalonil	M5	1.8 - 7.4 oz	Apply at first sign of disease and repeat as needed. Commercial use only.
	Fore Rainshield 80 WP	mancozeb	M3	4 oz	Apply at first sign of disease and repeat as needed.
	Renown 5.16 SC	chlorothalonil + azoxystrobin	11 + M5	2.5 - 4.5 oz	Apply at a 14 - 28 day interval. Commercial use only.
Nematodes	MultiGuard Protect 8.6 EC	furfural		0.126 - 0.184 gal (5.5 - 8 gal/A)	Apply up to 6 applications per year at 14 - 28 day intervals. Irrigate immediately after application with 1/4 - 1/2 acre inch water using overhead sprinklers.
	Indemnify 3.34 SC	fluopyram	7	0.195 - 0.39 fl oz (8.49 - 16.98 oz/A)	Do not apply more than 17.1 fl oz/A per year. Irrigate to depth of the root zone. Minimum time between applications is 14 days.
	Nimitz Pro G 1.5 G	fluensulfone		60 - 120 lbs/A	Do not apply more than 240 lbs of product per acre per calendar year.

**CAUTION: Chlorothalonil, Iprodione, Vinclozolin and PCNB are prohibited on home lawns (turf).**