

## DISEASE REFERENCE

### Fungicide Resistance Management Groups

Fungicides are organized into Fungicide Resistance Groups based on mode of action and chemical structure. In general, a pest that develops resistance to one fungicide within a group will probably be cross-resistant to other members of the group. Therefore, current resistance management strategies rely on rotation among different fungicide resistance groups. Source: Fungicide Resistance Action Committee ([www.frac.info](http://www.frac.info))

ACTIVE INGREDIENT	TRADE NAMES	FUNGICIDE RESISTANCE GROUP NAME	GROUP #	COMMENTS
thiophanate-methyl	Cavalier, Cleary's 3336, Fungo, Systemic Fungicide	MBC methyl benzimidazole carbamates	1	High Risk: Resistance common for many diseases including dollar spot and anthracnose
iprodione	Chipco 26019, Chipco 26GT, Fungicide X	dicarboximides	2	Medium Risk: Resistance known in some fungal species, including dollar spot
vinclozolin	Curalan, Touche, Vorlan	dicarboximides	2	
fenarimol	Patchwork, Rubigan	DMI demethylation inhibitor	3	
myclobutanil	Eagle, Golden Eagle	DMI	3	Medium Risk: Resistance known in some fungal species, including dollar spot
propiconazole	Banner Maxx	DMI	3	
triadimefon	Accost, Bayleton, Fungicide VII, Granular Turf Fungicide	DMI	3	
mefenoxam	Subdue Maxx, Quell	Phenylamides	4	High Risk: Resistance known in Pythium
metalaxyl	Pythium Control, Subdue	Phenylamides	4	
boscalid	Emerald	Carboxamides	7	Medium Risk: No known resistance in turf diseases
flutolanil	Prostar	Carboxamides	7	
azoxystrobin	Heritage	QoI: includes strobilurins	11	High Risk. Resistance known in gray leaf spot and anthracnose
pyraclostrobin	Insignia	QoI	11	
trifloxystrobin	Compass	QoI	11	
fludioxonil	Medallion	Phenylpyrrole	12	Medium Risk
etridiazole	Koban, Terrazole	Aromatic hydrocarbons	14	Medium Risk: Resistance known, but none on turf diseases
PCNB (quintozene)	Defend, Engage, Penstar, Revere, Terraclor, Turfcide	Aromatic hydrocarbons	14	
polyoxin D zinc	Endorse	Polyoxins	19	Medium Risk: No problems known on turf
propamocarb	Banol	Carbamate fungicides	28	Medium Risk: No resistance on turf diseases
fosetyl-AI	Aliette	Phosphonates	33	Low Risk: Resistance known, but none on turf diseases
phosphonates	Prodigy, Alude, Magellan, ReSyst	Phosphonates	33	
mancozeb	Dithane, Fore, Mancozeb, Protect, Pentathlon	Multi-site activity	M	Low Risk: no signs of resistance developing
thiram	Thiram, Spotrete	Multi-site activity	M	
chlorothalonil	Concorde, Daconil, Echo, Manicure, Thalonil	Multi-site activity	M	