

**Turf and Ornamental Insecticides  
Grouped by Mode of Actions  
Insecticide Resistance Action Committee (IRAC)**

MOA	Brand	Active	Company
1A	Mesurool	Methiocarb	Gowan
1A	Sevin	Carbaryl	Bayer
1B	Cygon	Dimethoate	
1B	Duraguard	Chlorpyrifos	Whitmire
1B	Dylox	Trichlorfon	Bayer
1B	Imidan	Phosmet	Gowan
1B	Malathion	Malathion	Prentiss
1B	Orthene T/O	Acephate	Valent/Arysta
2A	Thiodan	Endosulfan	Fuller
2B	TopChoice	Fipronil	Bayer
3	Astro	Permethrin	FMC
3	Decathlon	Cyfluthrin	Bayer/Olympic
3	DeltaGard	Deltamethrin	Bayer
3	Mavrik Aquaflo	Fluvalinate	Wellmark
3	Scrimitar CS	Lambda-cyhalothrin	Syngenta
3	Talstar	Bifenthrin	FMC
3	Tame	Fenpropathrin	Valent
3	Tempo SC	Beta-Cyfluthrin	Bayer
4A	Celero	Clothianidin	Arysta
4A	Flagship	Thiomethoxam	Syngenta
4A	Marathon/Merit	Imidiclopid	Bayer
4A	Safari	Dinotefuran	Valent
4A	TriStar	Acetamiprid	Cleary/Nisso
4A + 3	Allectus	Imidiclopid + Bifenthrin	Bayer
4A + 3	Discus	Imidiclopid + Cyfluthrin	Bayer/Olympic
5	Conserve	Spinosad	Dow
6	Avid	Abamectin	Syngenta
7B	Award	Fenoxycarb	Syngenta
9A	Endeavor	Pymetrozine	Syngenta
9C	Aria	Flonicamid	FMC
12C	Ornamite	Propargite	Crompton
13	Pylon	Chlorfenapyr	BASF/Olympic
18	Mach 2	Halofenozide	Dow
18	Ornazin, Azatin	Azadirachtin	Amvac
21	Sanmite	Pyridaben	BASF/Scotts
23	Forbid	Spiromesifen	Bayer
23	Judo	Spiromesifen	Bayer/Olympic
U	M-Pede	K Salt of Fatty Acids	Dow
U	Naturalis	Beauveria bassiana	Troy
U	Ultra-fine	Paraffinic Oil	Whitmire