

CROPLIFE AUSTRALIA FUNGICIDE RESISTANCE MANAGEMENT REVIEW GROUP
Fungicide Activity Group Table (Valid as at 7 June 2017)

FRAC Code	Fungicide Mode of Action Group	Chemical Family	Active Constituent	Trade Name* (Product name)
1	<i>Methyl Benzimidazole Carbamates</i>	<i>Benzimidazole</i>	carbendazim	<i>various</i>
			thiabendazole	<i>various</i> e.g. Tecto®
		<i>Thiophanates</i>	thiophanate-methyl	<i>various</i> e.g. Banrot®
2	<i>Dicarboximide</i>	<i>Dicarboximide</i>	iprodione	<i>various</i> e.g. Rovral®
			procymidone	<i>various</i> e.g. Sumisclex®
3	<i>DMI</i>	<i>Imidazole</i>	imazalil	<i>various</i> e.g. Fungaflor®
			prochloraz	<i>various</i> e.g. Octave®
		<i>Piperazine</i>	triforine	<i>various</i> e.g. Sapro®
		<i>Pyrimidine</i>	fenarimol	Rubigan®
		<i>Triazole</i>	bitertanol	Baycor®
			cyproconazole	Alto®
			difenoconazole	<i>various</i> e.g. Score®, Dividend®
			epoxiconazole	<i>various</i> e.g. Opus®
			fenbuconazole	Indar®
			fluquinconazole	<i>various</i> e.g. Jockey®
			flusilazole	<i>various</i> e.g. Nustar®
			flutriafol	<i>various</i> e.g. Armour®
			hexaconazole	<i>various</i>
			ipconazole	Rancona®
			myclobutanil	<i>various</i> e.g. Systhane®
			penconazole	Topas®
			propiconazole	<i>various</i> e.g. Tilt®
			prothioconazole	Brumby®, Prosaro®
			tebuconazole	<i>various</i> e.g. Raxil®, Folicur®
			tetraconazole	Domark®
			triadimefon	<i>various</i> e.g. Bayleton®
			triadimenol	<i>various</i> e.g. Bayfidan®, Baytan®
			triticonazole	<i>various</i> e.g. Premis®
4	<i>Phenylamide</i>	<i>Acylalanine</i>	benalaxyl (+ mancozeb)	Galben®M
			furalaxyl	Fongarid®
			metalaxyl	<i>various</i> e.g. Ridomil®, Apron®
			metalaxyl-m	<i>various</i> e.g. Ridomil® Gold, Apron XL®
		<i>Oxazolidinone</i>	oxadixyl (+ propineb)	Rebound®

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5	Amines (Morpholines)	Spiroketalamine	spiroxamine	Prosper®
7	SDHI (Succinate dehydrogenase inhibitors)	<i>n</i> -methoxy-(phenyl-ethyl)-pyrazole-carbox amide	Pydiflumetofen	Miravis®
		Oxathiin carboxamides	carboxin	various e.g. Vitavax®,
			oxycarboxin	Plantvax®
		Phenyl benzamides	flutolanil	Monstar®
		Pyridine carboxamides	boscalid	Filan®
		Pyrazole carboxamide	penthiopyrad	Fontelis®
			sedaxane	Vibrance®
			penflufen	EverGol® Prime
			fluxapyroxad	Systiva®
			bixafen	Aviator®
			isopyrazam	Seguris®
		Pyridinyl-ethyl-benzamides	fluopyram	Luna® Privilege, Luna® Sensation
8	Hydroxy-(2-amino-) pyrimidine	Hydroxy-(2-amino-) pyrimidine	bupirimate	Nimrod®
9	Anilinopyrimidine	Anilinopyrimidine	cyprodinil	Chorus®
			pyrimethanil	various e.g. Scala®
11	Quinone outside Inhibitors (QoIs)	Methoxy acrylate	azoxystrobin	various e.g. Amistar®, Dynasty®
		Oximino acetates	kresoxim-methyl	Stroby®
			trifloxystrobin	Flint®
		Methoxy carbamate	pyraclostrobin	Cabrio®
12	Phenylpyrroles	Phenylpyrroles	fludioxonil	Maxim®
13	aza-naphthalenes	Quinolines	quinoxifen	Legend®
		Quinazolinone	proquinazid	Talendo®
14	(Aromatic Hydrocarbons) (chlorophenyls, nitroanilines)	Aromatic hydrocarbons	quintozone	various e.g. Terraclor®
			tolclofos-methyl	various e.g. Rizolex®
	Heteroaromatics	1,2,4-thiadiazole	etridiazole	Terrazole®
17	Hydroxylanilide	Hydroxylanilide	fenhexamid	Teldor®
		Amino-pyrazolinone	fenpyrazamine	Prolectus®
20	Phenylureas	Phenylureas	pencycuron	Monceren®
21	Qil	Cyano-imidazole	cyazofamid	RanMan®
		Sulfamoyl-triazole	amisulbrom	Amicus blue®
28	Carbamate	Carbamate	iodocarb	various
			propamocarb	Previcur®
29	Unspecified	2,6-dinitro-anilines	fluazinam	various e.g. Shirlan®
33	Phosphonates	Ethyl phosphonate	fosetyl-aluminium	Aliette®
			phosphorous acid	various e.g. Foli-R-Fos®

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40	Carboxylic acid amides	Cinnamic acid derivative	dimethomorph	Acrobat®
		Malic acid	mandipropamid	Revus®
43	Benzamides	Pyridinylmethyl-benzamides	fluopicolide	Infinito®
44	Microbial (<i>Bacillus</i> sp.)	<i>Bacillus</i> sp. and the fungicidal lipopeptides produced	Bacillus subtilis syn. B.amyloliquefaciens* strain QST 713	*synonyms for <i>Bacillus amyloliquefaciens</i> are <i>Bacillus subtilis</i> and <i>B. subtilis</i> var. <i>amyloliquefaciens</i> (previous taxonomic classification)
			Bacillus amyloliquefaciens strain MBI600	
45	QxI	Triazolo-pyrimidylamine	ametoctradin	Zampro®
49	OSBPI oxysterol binding protein homologue inhibition	piperidinyl-thiazole-isoxazolines	oxathiapiprolin	Zorvec® Enicade®
M	Multi-site activity	Inorganic	chlorine dioxide	Vibrex®
			hydrogen peroxide + peroxyacetic acid	Peratec®
			iodine	various
			mercury	Shirtan®
			sodium metabisulphite	Osku-vid®
		Hydroxyquinoline	8-hydroxyquinoline	Staehler Grafting Wax
M1	Multi-site activity	Inorganic	copper cuprous oxide	various
			copper hydroxide	various e.g. Kocide®
			copper oxychloride	various e.g. Oxydul®
			copper ammonium acetate	Liquicop®
			tribasic copper sulphate	Tri-base Blue®
			copper octanoate	Tricop®
M2	Multi-site activity	Inorganic	sulphur	various e.g. Thiovit®, Kumulus®
			potassium bicarbonate	Ecocarb®
			calcium polysulfide	Miller Lime Sulfur Solution Fungicide Insecticide®
M3	Multi-site activity	Dithiocarbamate	mancozeb	various e.g. Dithane®
			metiram	Polyram®
			thiram	various e.g. Thiram
			propineb	various e.g. Antracol®
			zineb	Zineb
			ziram	various e.g. Ziram
M4	Multi-site activity	Phthalimide	captan	various e.g. Captan
M5	Multi-site activity	Chloronitriles	chlorothalonil	various e.g. Bravo®

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M6	<i>Multi-site activity</i>	<i>Sulfamide</i>	tolyfluanid	Euparen Multi®
M7	<i>Multi-site activity</i>	<i>Guanidine</i>	guazatine	various e.g. Panocrine®
M9	<i>Multi-site activity</i>	<i>Quinone (anthraquinone)</i>	dithianon	various e.g. Delan®
U1	<i>Unknown</i>	<i>Potassium salts of fatty acids</i>	potassium salts of fatty acids	EcoProtector®
U6	<i>Unknown</i>	<i>Phenyl-acetamide</i>	cyflufenamid	Flute®
U8	<i>Actin disruption</i>	<i>Benzophenone</i>	metrafenone	Vivando®
		<i>Benzoylpyridine</i>	Pyriofenone	Kusabi®
U12	<i>Cell Membrane Disruption (proposed)</i>	<i>Guanidine</i>	dodine	Syllit®
U15	<i>oxysterol binding protein (OSBP) inhibition (proposed)</i>	<i>piperidiny-thiazole-isoxazoles</i>	oxathiapiprolin	Zorvec® Enicade®

Notes:

- The table does not include active constituents that have not yet been assigned an activity group by CropLife Australia.
- Some products are mixtures of fungicides from different activity groups. These appear only once in the table.
- If multiple trade names exist, the trade name entry is listed as various and the first registered trade name included.

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