

CROPLIFE AUSTRALIA FUNGICIDE RESISTANCE MANAGEMENT REVIEW GROUP
Fungicide Activity Group Table (Valid as at 10 June 2016)

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. Saprol [®]
		<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 [®]

This document is a guide only and does not endorse particular products, groups of products or cultural methods in terms of their performance. Always follow the product label for specific use instructions. While all effort has been taken with the information supplied in this document no responsibility, actual or implied, is taken for the day to day accuracy of product or active constituent specific information. Readers should check with the Australian regulator's (APVMA) product database for contemporary information on products and actives. The database can be sourced through www.apvma.gov.au. The information given in this document is provided in good faith and without any liability for loss or damage suffered as a result of its application and use. Advice given in this strategy is valid as at 10 June 2016. All previous versions of this strategy are now invalid.

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5	Amines (Morpholines)	Spiroketalamine	spiroxamine	Prosper®
7	SDHI (Succinate dehydrogenase inhibitors)	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 (Qols)	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-napthalenes	Quinolines	quinoxifen	Legend®
		Quinazolinone	proquinozid	Talendo®
14	(Aromatic Hydrocarbons) (chlorophenyls, nitroanilines)	Aromatic hydrocarbons	quintozene	various e.g. Terraclor®
			tolclofos-methyl	various e.g. Rizolex®
	Heteroaromatics	1,2,4-thiadiazole	etridiazole	Terrazole®
17	Hydroxyanilide	Hydroxyanilide	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®
40	Carboxylic acid amides	Cinnamic acid derivative	dimethomorph	Acrobat®
		Malic acid	mandipropamid	Revus®

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Phone: 02 62732733 Email: info@croplife.org.au Website: www.croplife.org.au

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43	Benzamides	Pyridinylmethyl-benzamides	fluopicolide	Ifinito®
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®
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®
M6	Multi-site activity	Sulfamide	tolyfluanid	Euparen Multi®
M7	Multi-site activity	Guanidine	guazatine	various e.g. Panocrine®
M9	Multi-site activity	Quinone (anthraquinone)	dithianon	various e.g. Delan®
U1	Unknown	Potassium salts of fatty acids	potassium salts of fatty acids	EcoProtector®
U6	Unknown	Phenyl-acetamide	cyflufenamid	Flute®

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U8	<i>Actin disruption</i>	<i>Benzophenone</i>	metrafenone	Vivando®
			Pyriofenone	Kusabi®
U12	<i>Cell Membrane Disruption (proposed)</i>	<i>Guanidine</i>	dodine	Syllit®
U15	<i>oxysterol binding protein (OSBP) inhibition (proposed)</i>	<i>piperidinyl-thiazole-isoxazolines</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.
- ® Registered trademark