



## FRAC LIST OF FUNGICIDE COMMON NAMES - 2012

The Common Names, MOA Code, FRAC Code and Chemical Group names included in this list are those used in the FRAC Code List and the associated List of Plant Pathogenic Organisms Resistant to Disease Control Agents.

Common Name	MOA Code	FRAC Code	Chemical Group
Acibenzolar-S-methyl	P1: benzo-thiadiazole BTH	P	benzo-thiadiazole BTH
Aldimorph	G2: Amines (morpholines) SBI Class II	5	morpholine
Ametoctradin	C8: QxI	45	triazolo-pyrimidylamine
Amisulbrom	C4: QiI	21	sulfamoyl-triazole
Anilazine	Multi-site: triazine	M8	triazine
Azaconazole	G1: DMI (SBI class 1)	3	triazole
Azoxystrobin	C3: QoI	11	methoxy-acrylates
<i>Bacillus subtilis</i> strain QST713	F6: Microbial	44	microbial disrupters of pathogen cell membranes
<i>Bacillus subtilis</i> strain FZB24	F6: Microbial	44	microbial disrupters of pathogen cell membranes
Benalaxyl	A1: Phenylamide	4	acylalanine
Benalaxyl-M (kiralaxyl)	A1: Phenylamide	4	acylalanine
Benodanil	C2: SDHI	7	phenyl-benzamide
Benomyl	B1: MBC	1	benzimidazole
Benthiavalicarb	F5: CAA fungicides	40	valinamide carbamates
Binapacryl	C5	29	dinitrophenyl crotonate
Biphenyl	F3: AH fungicides	14	aromatic hydrocarbons
Bitertanol	G1: DMI (SBI class 1)	3	triazole
Bixafen	C2: SDHI	7	Pyrazole-carboxamide
Blasticidin-S	D2: enopyranuronic acid antibiotic	23	enopyranuronic acid antibiotic
Boscalid	C2: SDHI	7	pyridine-carboxamide
Bromuconazole	G1: DMI (SBI class 1)	3	triazole
Bupirimate	A2: Hydroxy-(2-amino) pyrimidine	8	hydroxy-(2-amino) pyrimidine
Captafol	Multi-site: phthalimide	M4	phthalimide
Captan	Multi-site: phthalimide	M4	phthalimide
Carbendazim	B1: MBC	1	benzimidazole
Carboxin	C2: SDHI	7	oxathiin-carboxamide

Carpropamid	I2: MBI-D	16.2	cyclopropane carboxamide
Chloroneb	F3: AH fungicides	14	aromatic hydrocarbons
Chlorothalonil	Multi-site: chloronitrile (phthalonitrile)	M5	chloronitrile (phthalonitrile)
Chlozolate	E3: dicarboximide	2	dicarboximide
Copper (different salts)	Multi-site	M1	inorganic
Coumoxystrobin	C3: QoI	11	Methoxy-acrylate
Cyazofamid	C4: QiI	21	cyano-imidazole
Cyflufenamid	Unknown: phenyl-acetamide	U6	phenyl-acetamide
Cymoxanil	Unknown: Cyanoacetamide-oxime	27	cyanoacetamide-oxime
Cyproconazole	G1: DMI (SBI class 1)	3	triazole
Cyprodinil	D1: AP fungicides	9	anilino-pyrimidine
Dichlofluanid	Multi-site: sulfamide	M6	sulfamide
Diclocymet	I2: MBI-D	16.2	carboxamide
Diclomezine	Unknown: pyridazinone	37	pyridazinone
Dicloran	F3: AH fungicides	14	aromatic hydrocarbons
Diethofencarb	B2: N-phenyl carbamate	10	N-phenyl carbamate
Difenoconazole	G1: DMI (SBI class 1)	3	triazole
Diflumetorim	C1: pyridinamine	39	pyridinamine
Dimethomorph	F5: CAA fungicides	40	cinnamic acid amide
Dimethirimol	A2: Hydroxy-(2-amino) pyrimidine	8	hydroxy-(2-amino) pyrimidine
Dimoxystrobin	C3: QoI	11	oximino-acetamide
Diniconazole	G1: DMI (SBI class 1)	3	triazole
Dinocap	C5	29	dinitrophenyl crotonate
Dithianon	Multi-site: quinone (anthraquinone)	M9	quinone (anthraquinone)
Dodemorph	G2: Amines (morpholines) SBI Class II	5	morpholine
Dodine	U12: Unknown	U12	guanidine
Edifenphos	F2: phosphorothiolates	6	phosphorothiolates
Enoxastrobin	C3: QoI	11	methoxy-acrylates
Epoxiconazole	G1: DMI (SBI class 1)	3	triazole
Etaconazole	G1: DMI (SBI class 1)	3	triazole
Ethaboxam	Unknown: thiazole carboxamide	U5	ethylamino-thiazole carboxamide
Ethirimol	A2: Hydroxy-(2-amino) pyrimidine	8	hydroxy-(2-amino) pyrimidine
Etridiazole	F3: AH fungicides	14	1,2,4 thiadiazole
Extract from <i>Melaleuca alternifolia</i> (tea tree)	F7: plant extract, membrane disruption (proposed)	46	terpene hydrocarbons and terpene alcohols
Extract from <i>Reynoutria sachalinensis</i> (giant knotweed)	P5: plant extract	P	complex mixture, ethanol extract
Famoxadone	C3: QoI	11	oxazolidine-dione
Fenamidone	C3: QoI	11	imidazolinone
Fenarimol	G1: DMI (SBI class 1)	3	pyrimidine
Fenbuconazole	G1: DMI (SBI class 1)	3	triazole

Fenfuram	C2: SDHI	7	furan-carboxamide
Fenhexamid	G3: hydroxyanilide (SBI Class III)	17	hydroxyanilide
Fenoxanil	I2: MBI-D	16.2	propionamide
Fenpiclonil	E2: PP fungicides	12	phenylpyrrole
Fenpropidin	G2: Amines (morpholines) SBI Class II	5	piperidine
Fenpropimorph	G2: Amines (morpholines) SBI Class II	5	morpholine
Fentin acetate	C6: organo tin	30	tri-phenyl tin
Fentin chloride	C6: organo tin	30	tri-phenyl tin
Fentin hydroxide	C6: organo tin	30	tri-phenyl tin
Ferbam	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Ferimzone	unknown	U14	Pyrimidinone hydrazones
Fluazinam	C5	29	2-6-dinitro anilines
Fludioxonil	E2: PP fungicides	12	phenylpyrrole
Flufenoxystrobin	C3: QoI	11	methoxy-acrylate
Flumorph	F5: CAA fungicides	40	cinnamic acid amide
Fluopicolide	B5: benzamide	43	pyridinylmethyl-benzamide
Fluoxastrobin	C3: QoI	11	dihydro-dioxazine
Fluquinconazole	G1: DMI (SBI class 1)	3	triazole
Flusilazole	G1: DMI (SBI class 1)	3	triazole
Flusulfamide	Unknown: benzene- sulfonamide	36	benzene-sulfonamide
Flutolanil	C2: SDHI	7	phenyl-benzamide
Flutriafol	G1: DMI (SBI class 1)	3	triazole
Folpet	Multi-site: phthalimide	M4	phthalimide
Fosetyl-Al	Unknown: phosphonate	33	ethyl phosphonate
Fthalide	I1: MBI-R	16.1	isobenzofuranone
Fuberidazole	B1: MBC	1	benzimidazole
Furalaxyl	A1: Phenylamide	4	acylalanine
Furametpyr	C2: SDHI	7	pyrazole-carboxamide
Guazatine	Multi-site: guanidine	M7	guanidine
Hexaconazole	G1: DMI (SBI class 1)	3	triazole
Hymexazole	A3: heteroaromatics	32	isoxazoles
Imazalil	G1: DMI (SBI class 1)	3	imidazole
Imibenconazole	G1: DMI (SBI class 1)	3	triazole
Iminoctadine	Multi-site: guanidine	M7	guanidine
Iodocarb	F4: carbamates	28	carbamates
Ipronazole	G1: DMI (SBI class 1)	3	triazole
Iprobenfos	F2: phosphorothiolates	6	phosphorothiolates
Iprodione	E3: dicarboximide	2	dicarboximide
Iprovalicarb	F5: CAA fungicides	40	valinamide carbamates
Isoprothiolane	F2: phosphorothiolates	6	dithiolane
Isopyrazam	C2: SDHI	7	Pyrazole-carboxamide
Isotianil	P3: thiadiazole carboxamide	P	thiadiazole carboxamide
Kasugamycin	D3: hexopyranosyl antibiotic	24	hexopyranosyl antibiotic
Kresoxim-methyl	C3: QoI	11	oximino-acetate
Laminarin	P4 (proposed): natural	P	
Mancozeb	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Mandipropamid	F5: CAA fungicides	40	mandelic acid amide

Maneb	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Mepanypyrim	D1: AP fungicides	9	anilino-pyrimidine
Mepronil	C2: SDHI	7	phenyl-benzamide
Meptyldinocap	C5	29	dinitrophenyl crotonate
Metalaxyl	A1: Phenylamide	4	acylalanine
Metalaxyl-M (= Mefenoxam)	A1: Phenylamide	4	acylalanine
Metominostrobin	C3: QoI	11	oximino-acetamide
Metconazole	G1: DMI (SBI class 1)	3	triazole
Methasulfocarb	Unknown: thiocarbamate	42	thiocarbamate
Metiram	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Metrafenone	Unknown: benzophenone	U8	benzophenone
Myclobutanil	G1: DMI (SBI class 1)	3	triazole
Naftifine	G4: SBI Class IV	18	allylamine: medical only
Nuarimol	G1: DMI (SBI class 1)	3	pyrimidine
Octhilinone	A3: heteroaromatics	32	isothiazolones
Ofurace	A1: Phenylamide	4	butyrolactone
Orysastrobin	C3: QoI	11	oximino-acetamide
Oxadixyl	A1: Phenylamide	4	oxazolidinone
Oxolinic acid	A4: carboxylic acids	31	carboxylic acids
Oxpoconazole	G1: DMI (SBI class 1)	3	imidazole
Oxycarboxin	C2: SDHI	7	oxathiin-carboxamide
Oxytetracycline	D5: tetracycline antibiotic	41	tetracycline antibiotic
Pefurazate	G1: DMI (SBI class 1)	3	imidazole
Penconazole	G1: DMI (SBI class 1)	3	triazole
Pencycuron	B4: phenylurea (proposed)	20	phenylurea
Penflufen	C2: SDHI	7	pyrazole-carboxamide
Penthiopyrad	C2: SDHI	7	pyrazole-carboxamide
Phosphorous acid and salts	Unknown: phosphonate	33	
Picoxystrobin	C3: QoI	11	methoxy-acrylates
Piperalin	G2: Amines (morpholines) SBI Class II	5	piperidine
Polyoxin	H4: Polyoxins	19	polyoxins
Probenazole	P2: benzisothiazole	P	benzisothiazole
Prochloraz	G1: DMI (SBI class 1)	3	imidazole
Procymidone	E3: dicarboximide	2	dicarboximide
Propamocarb	F4: carbamates	28	carbamates
Propiconazole	G1: DMI (SBI class 1)	3	triazole
Propineb	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Proquinazid	E1: Azanaphthalenes	13	quinazolinone
Prothiocarb	F4: carbamates	28	carbamates
Prothioconazole	G1: DMI (SBI class 1)	3	triazole
Pyraclostrobin	C3: QoI	11	methoxy-carbamate
Pyrametostrobin	C3: QoI	11	methoxy-carbamate
Pyraoxystrobin	C3: QoI	11	methoxy-acrylate
Pyrazophos	F2: phosphorothiolates	6	phosphorothiolates
Pyribencarb	C3: QoI	11	benzyl-carbamate
Pyributicarb	G4: SBI Class IV	18	thiocarbamate
Pyrifenoxy	G1: DMI (SBI class 1)	3	pyridine

Pyrimethanil	D1: AP fungicides	9	anilino-pyrimidine
Pyroquilon	I1: MBI-R	16.1	pyrrolo-quinolone
Quinoxifen	E1: Azanaphthalenes	13	aryloxyquinoline
Quintozene (PCNB)	F3: AH fungicides	14	aromatic hydrocarbons
Sedaxane	C2: SDHI	7	Pyrazole-carboxamide
Silthiofam	C7: thiophene carboxamide	38	thiophene carboxamide
Simeconazole	G1: DMI (SBI class 1)	3	triazole
Spiroxamine	G2: Amines (morpholines) SBI Class II	5	spiroketal-amine
Streptomycin	D4: glucopyranosyl antibiotic	25	glucopyranosyl antibiotic
Sulphur	Multi-site	M2	inorganic
Tebuconazole	G1: DMI (SBI class 1)	3	triazole
Teclofthalam	Unknown: phthalamic acid	34	phthalamic acid (bactericide)
Tecnazene (TCNB)	F3: AH fungicides	14	aromatic hydrocarbons
Terbinafine	G4: SBI Class IV	18	allylamine: medical only
Tetraconazole	G1: DMI (SBI class 1)	3	triazole
Thiabendazole	B1: MBC	1	benzimidazole
Thifluzamide	C2: SDHI	7	thiazole-carboxamide
Thiophanate	B1: MBC	1	thiophanate
Thiophanate-methyl	B1: MBC	1	thiophanate
Thiram	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Tiadinil	P3: thiadiazole carboxamide	P	thiadiazole carboxamide
Tolclofos-methyl	F3: AH fungicides	14	aromatic hydrocarbons
Tolyfluanid	Multi-site: sulfamide	M6	sulfamide
Triadimefon	G1: DMI (SBI class 1)	3	triazole
Triadimenol	G1: DMI (SBI class 1)	3	triazole
Triazoxide	Unknown: benzotriazine	35	benzotriazine
Triclopyricarb	C3: QoI	11	methoxy-carbamate
Tricyclazole	I1: MBI-R	16.1	triazolobenzothiazole
Tridemorph	G2: Amines (morpholines) SBI Class II	5	morpholine
Trifloxystrobin	C3: QoI	11	oximino-acetate
Triflumizole	G1: DMI (SBI class 1)	3	imidazole
Triforine	G1: DMI (SBI class 1)	3	piperazine
Triticonazole	G1: DMI (SBI class 1)	3	triazole
Validamycin	H3: glucopyranosyl antibiotic	26	glucopyranosyl antibiotic
Valifenalate	F5: CAA fungicides	40	valinamide carbamates
Vinclozolin	E3: dicarboximide	2	dicarboximide
Zineb	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Ziram	Multi-site: dithiocarbamates and relatives	M3	dithiocarbamates and relatives
Zoxamide	B3: benzamides	22	toluamide