FUNGICIDE CLASSIFICATION

REPEATED USE OF FUNGICIDES WITH THE SAME SITE OF ACTION CAN RESULT IN THE DEVELOPMENT OF FUNGICIDE-RESISTANT PATHOGEN POPULATION.

by MODE OF ACTION
(effect on plant pathogen)

This section groups fungicides by their modes of action to assist you in selecting fungicides **1)** to maintain greater diversity in fungicide use and **2)** to rotate among effective fungicides with different sites of action to delay the development of fungicide resistance.

	FRAC CODE	SITE OF ACTION	CHEMICAL FAMILY	ACTIVE INGREDIENT	PRODUCT EXAMPLES (TRADE NAME)
MITOSIS DISRUPTERS					
	1	**MBC (Methyl Benzimidazole Carbamates) B1: ß-tubuline assembly in mitosis**	Thiophanates	Thiophanate-methyl	Topsin, multiple generics and component in premix
CELL MEMBRANE DISRUPTERS					
	3	**DMI(DeMethylation Inhibitors)/Triazoles G1: C14- demethylase in sterol biosynthesis (erg11/cyp51)**	Triazoles	Cyproconazole	Alto and component in premix
				Flutriafol Propiconazole	Topguard and component in premix Tilt, multiple generics
				Tetraconazole Difenoconazole	Domark, multiple generics and component in premix Component of Quadris Top
				Tebuconazole	Folicur, multiple generics and component in premix
			Triazolinthiones	Prothioconazole	Proline and component in premix
RESPIRATION INHIBITORS					
	7	**SDHI (Succinate dehydrogenase inhibitors)/Carboximides complex II: succinate-dehydrogenase**	Pyridinecarboxamides	Boscalid	Endura
			Pyrazole-4- carboxamides	Fluxapyroxad Solatenol Penthiopyrad	Component of Priaxor Component of Trivapro Fontelis
	11	**QoI (Quinone oustide inhibitors)/ Strobilurins C3: complex III: cytochrome bc1 (ubiquinol oxidase) at Qo site (cyt b gene)**	Methoxy-acrylates	Azoxystrobin	Quadris, Equation, Trevo, multiple generics and component in premix
				Picoxystrobin	Aproach and component in premix
			Dihydro-dioxazines	Fluoxastrobin	Aftershock, Evito
			Methoxy-carbamates	Pyraclostrobin	Headline
			Oximino-acetates	Trifloxystrobin	Component of Stratego YLD
MULTI-SITE CONTACT ACTIVITY					
	M1	**Multi-site contact activity**	Inorganic	Copper (different salts)	Badge and multiple generics
	M5		Chloronitriles (Phthalonitriles)	Chlorothalonil	Bravo Weather Stik, multiple generics and component in premix
UNKNOWN					
	33	**Unknown**	Phosphonates	Phophorous acid and salts	Component in premix

*For more information and links to additional resources visit **Soybean Fungicide Resistance Hub** at **PlantManagementNetwork.org***

by PREMIX

This section lists premix fungicides alphabetically by their trade names so you can identify the premix's component fungicides and their respective site of action groups. Refer to the **Site of Action** section on the left for more information.

PREMIX	ACTIVE INGREDIENT (%)	FRAC GROUP
QUADRIS TOP	Azoxystrobin 18.2%	11
	Difenoconazole 11.4%	3
AVARIS	Azoxystrobin 7.0%	11
	Propiconazole 11.7%	3
QUILT	Azoxystrobin 7.0%	11
	Propiconazole 11.7%	3
QUILT XCEL	Azoxystrobin 13.5%	11
	Propiconazole 11.7%	3
APROACH PRIMA	Picoxystrobin 17.94%	11
	Cyproconazole 7.17%	3
EVITO T	Fluoxastrobin 18.0%	11
	Tebuconazole 25.0%	3
FORTIX	Fluoxastrobin 14.84%	11
	Flutriafol 19.3%	3
PRIAXOR	Pyraclostrobin 28.58%	11
	Fluxapyroxad 14.33%	7
PRIAXOR D	Pyraclostrobin 28.58%	11
	Fluxapyroxad 14.33%	7
	Tetraconazole 20.5%	3
STRATEGO	Trifloxystrobin 11.4%	11
	Prothioconazole 11.4%	3
STRATEGO YLD	Trifloxystrobin 32.3%	11
	Prothioconazole 10.8%	3
OVERRULE	Tebuconazole 7.5%	3
	Thiophanate-methyl 37.5%	1
TOPSIN XRT	Tebuconazole 7.5%	3
	Thiophanate-methyl 37.5%	1
PROTOCOL	Propiconazole 7.1%	3
	Thiophanate-methyl 23.7%	1
MUSCLE ADV	Tebuconazole 8.47%	3
	Chlorothalonil 30.51%	M5
AFFIANCE	Azoxystrobin 9.35%	11
	Tetraconazole 7.48%	3
AFRAME PLUS	Azoxystrobin 13.5%	11
	Propiconazole 11.7%	3
AZOXY TEB	Azoxystrobin 11.0%	11
	Tebuconazole 18.35%	3
AZOXYPROP XTRA	Azoxystrobin 13.5%	11
	Propiconazole 11.7%	3
CATAMARAN	Potassium Phosphite 38.9%	33
	Chlorothalonil 16.7%	M5
VIATHON	Potassium Phosphite 49%	33
	Tebuconazole 3.3%	3
COVER XL	Azoxystrobin 13.5%	11
	Propiconazole 11.7%	3
CUSTODIA	Azoxystrobin 11.0%	11
	Tebuconazole 18.35%	3
PREEMPTOR	Fluoxastrobin 14.84%	11
	Flutriafol 19.3%	3
QUADRIS TOP SB	Azoxystrobin 18.2%	11
	Difenoconazole 7.3%	3

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Check for a label and Material Safety Data Sheet at ***www.cdms.net*** to confirm status and always consult label prior to use.

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