## **Fungicides and Bactericides for Treatment of Various Orchid Diseases**

by Sue Bottom, sbottom15@hotmail.com
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Chemical Name Active Ingredient	FRAC Mode of Action Group	Application Rate (tsp/gal)	Spray or Drench?	Mobility	Unit Cost	Bacterial Diseases	Water Molds	Fungal Bulb, Root and Stem Rots			Leaf & Flower Blights		
						Rots and Spots	Black Rot	Fusarium Wilt	Root Rot	Southern Blight	Anthrac- nose	Leaf Spots	Botrytis
						Erwinia Pseudomonas	Pythium Phytophthora	Fusarium	Rhizoctonia	Sclerotium	Colletotrichum	Cercospora Guignardia	Botrytis
Commonly Available Fungicides and Bactericides													
Captan 50W Captan 50%	М	5	Spray	Contact	\$15 / 8 oz						spray	spray	spray
Consan 20 (Physan)  Quaternary Ammonium Chlorides 20%	not classified	1.5	Spray	Contact	\$23 / 16 fl oz	spray					spray	spray	spray
Daconil Ultrex Chlorothalonil 29.6%	M5	2.25	Spray	Contact	\$19 / 16 fl oz				spray		spray	spray	spray
Dithane M45, Mancozeb Mn,Zn,Ethylene bisdithiocarbamate 80%	М	4.5	Spray	Contact	\$13 / 6 oz						spray	spray	spray
Hydrogen Peroxide Hydrogen Peroxide 3%	not classified	full strength	Spray	Contact	\$2 / 16 fl oz	spray							
Kocide 3000-O Copper Hydroxide 46.1%	М	0.44-1.31	Spray	Contact	\$38 / 3 lb	spray			spray		spray	spray	spray
Liquid Copper Copper Ammonium Complex 31.4%	М	2 - 6	Spray	Contact	\$16 / 16 fl oz	spray					spray	spray	spray
SA-20 Disinfectant Quaternary Ammonium Chlorides 20%	not classified	1 - 1.5	Spray	Contact	\$36 / gal	spray					spray	spray	spray
Specialty Fungicides and Bactericides													
Agri-mycin 17 (Harbour) Streptomycin 17% (Streptomycin Sulfate 22.4%)	25	1 - 4	Spray	Contact	\$50 / 2 lb	spray							
Aliette WDG Fosetyl aluminum 80%	M(33)	3.5 - 7.1 0.6 - 1.1	Spray Drench	Amphi- mobile	\$155 / 5 lb		drench						spray
Banrot 40WP Etridiazole 15% Thiophanate Methyl 25%	1,14	.54 - 1.1	Spray Drench	Xylem Mobile	\$83 / 2 lb		drench	drench	drench	drench	spray	spray	spray
Chipco 26019 Iprodione 50%	2	1.6	Drench	Contact	\$110 / 2 lb			drench	drench		spray		spray
Daconil Ultrex Chlorothalonil 82.5%	M5	1.75	Spray	Contact	\$67 / 5 lb				spray		spray	spray	spray
Eagle 20EW Myclobutanil 19.7%	3	0.36-0.72	Spray Drench	Locally Systemic	\$190 / gal				drench	drench	spray	spray	
Junction Mancozeb 15% Copper Hydroxide 46.1%	M1 M3	2.5 - 5.9	Spray	Contact	\$120/6 lb	spray			spray		spray	spray	spray
KleenGrow Didecyl dimethyl ammonium chloride 7.5%	not classified	0.36 - 2.3 0.36 - 3.0	Spray Drench	Contact	\$130 / gal	spray		drench?	_			spray	spray

Note: Review product label for specific instructions on use and rates before purchasing and making application. Notations highlighted in red indicate a very good to excellent rating in the 2021 Guide to Ornamental Fungicides by Syngenta, drench? indicates it is labeled for use as a drench but is a multisite fungicide so it may impact beneficial microorganisms. Fungicides over \$200 excluded (as of 2017).

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						Erwinia Pseudomonas	Pythium Phytophthora	Fusarium	Rhizoctonia	Sclerotium	Colletotrichum	Cercospora Guignardia	Botrytis
<b>Specialty Fungicides and Bacterio</b>	cides (	cont'd)											
Empress Intrinsic	11	.1236	Drench	Locally Systemic	\$175 / 24 fl		drench	drench	drench				
Pyraclostrobin 23.3%		.1230			oz		dielicii	diencii	dielicii				
Heritage SC	11	0.1 - 0.9		Locally Systemic			drench	drench	drench	drench	spray	spray	spray
Azoxystrobin 22.9%		0.05 - 0.2											
Medallion WDG	12	0.25 - 0.5	-	Contact	\$200 / 8 fl oz	1		drench	drench	drench	enrav	enray	spray
Fludioxonil 50%		0.13 - 0.3						urencii	dielicii	diencii	spray	spray	spray
OHP 6672 50 WP (Cleary's 3336 WP)	1	0.6 - 0.8	Spray	Xylem Mobile	\$33 / 2 lb			drench	drench		enrav	enray	enrav
Thiophanate Methyl 50%		0.4 - 0.8	Drench					ulelicii	dielicii		spray	spray	spray
Pageant Instrinsic	7,11	.4669	Spray	Xylem Mobile	\$103 / 1 lb		drench	drench	drench	drench	spray	spray	spray
Pyraclostrobin 12.8% Boscalid 25.2%		.4009	Drench										
Phyton 27/Phyton 35	M1	0.78 - 2.4	Spray	Contact	\$90 / liter	spray	drench?	drench?	drench?	spray	spray	spray	spray
Copper Sulfate Pentahydrate 21.36%/21.27%	M2	0.70 - 2.4	Оргау			Spray	ulenen:	dicilor:	ulcilcii:	Spray	Spray	Spray	Spray
Protect 75 DF	М	1.5 - 2.9	Spray	Contact	\$68 / 6 lb						enrav	spray	spray
Mn,Zn,Ethylene bisdithiocarbamate 75%		1.5 - 2.9	Opray								spray	Spray	Spray
Spectro 90WDG	1. M5	0.7 - 1.3	Spray	Xylem Mobile	\$78 / 5 lb		drench?				spray	spray	spray
Chlorothalonil 72%, Thiophanate Methyl 18%	1, 1010	0.7 - 1.5					ulenon:				Spray	Spray	Spray
Strike Plus 50 WDG	3, 11	2 - 4	Spray	Contact	\$138 / 1 lb						spray	spray	
Trifloxystrobin 8.33%, Triadimefon 41.67%	5, 11	2-4									Spray	Spray	
Subdue MAXX	4	.0306	Spray	Xylem Mobile	\$180 / qt		drench						
Metalaxyl 21.3%	Т		Drench				diction						
Terraclor 400	14	.3672	Drench		\$110 / gal				drench	drench			spray
Pentachloronitrobenzene (PCNB) 40.0%	17								diction	diction			эргау
Terrazole 35 WP	14	0.7 - 1.9	Drench		\$93/ 2 lb		drench						
Etridiazole 35%	14		Dienon				dienon						
Thiomyl	1	2.5 - 3.3	Spray Drench	Xylem Mobile	\$23 / 6 oz			drench	drench		spray	spray	spray
Thiophanate Methyl 50%		1.6 - 3.3						diction	diction		эргау	Зріау	эргау
Truban 25EC	14	0.23 - 0.47	Drench	Contact	\$73 / qt		drench						
Etridiazole 25%							diction						
Zerotol 2.0	nc	2 - 7.5	Spray	Contact	\$130 / gal	spray	drench?	drench?	drench?	drench?			spray
Peroxide 27.1% Peroxyacetic Acid 2.0%		7.5	Drench			эргау							эргау
Granulars		(tsp/6 in pot)	)						'				
T Methyl Granular	1	1 - 2	Top Dress	Xylem	\$60/30 lb			top dress	top dress				
Thiophanate Methyl 2.08%			, 2,120	Mobile	,				3				

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