

Fungicides and Bactericides for Treatment of Various Orchid Diseases

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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	Anthracnose	Leaf Spots	Botrytis
						<i>Erwinia Pseudomonas</i>	<i>Pythium</i>	<i>Fusarium</i>	<i>Rhizoctonia</i>	<i>Sclerotium</i>	<i>Colletotrichum</i>	<i>Cercospora</i>	<i>Botrytis</i>
						<i>Pseudomonas</i>	<i>Phytophthora</i>					<i>Guignardia</i>	
Commonly Available Fungicides and Bactericides													
Captan 50W	M	5	Spray	Contact	\$15 / 8 oz								
Captan 50%													
Cinnamon	not classified	full strength	Dust	Contact	\$12 / 18 oz								
Cinnamon													
Consan 20 (Physan)	not classified	1.5	Spray	Contact	\$23 / 16 fl oz	spray							
Quaternary Ammonium Chlorides 20%													
Daconil	M5	2.25	Spray	Contact	\$19 / 16 fl oz			drench?	drench?				
Chlorothalonil 29.6%													
Dithane M45, Mancozeb	M	4.5	Spray	Contact	\$13 / 6 oz								
Mn,Zn,Ethylene bisdithiocarbamate 80%													
Hydrogen Peroxide	not classified	full strength	Spray	Contact	\$2 / 16 fl oz	spray							
Hydrogen Peroxide 3%													
CuPro 5000 (Kocide)	M	1.4 - 3.6	Spray	Contact	\$38 / 3 lb	spray							
Copper Hydroxide 61.3%													
Liquid Copper	M	2 - 6	Spray	Contact	\$16 / 16 fl oz	spray							
Copper Ammonium Complex 31.4%													
SA-20 Disinfectant	not classified	1 - 1.5	Spray	Contact	\$36 / gal	spray							
Quaternary Ammonium Chlorides 20%													
Sulfur Wettable Powder	M	12	Dust or Spray	Contact	\$14 / 5 lb								
Sulfur 90%													
Specialty Fungicides and Bactericides													
Aliette WDG	M(33)	3.5 - 7.1	Spray	Amphi-mobile	\$155 / 5 lb								
Fosetyl aluminum 80%			Drench				drench						
Chipco 26019	2	1.6	Drench	Contact	\$110 / 2 lb				drench	drench			spray
Iprodione 50%													
Cleary's 3336F	1	0.75 - 1	Spray	Xylem Mobile	\$57 / quart				drench	drench			
Thiophanate Methyl 41.25%		0.5 - 0.75	Drench										
Daconil Ultrex	M5	1.75	Spray	Contact	\$67 / 5 lb				drench?	drench?			
Chlorothalonil 82.5%													
Empress	11	.12 - .36	Drench	Locally Systemic	\$175 / 24 fl oz				drench	drench			
Pyraclostrobin 23.3%													
Heritage DF50	11	.09 - .37	Spray	Locally Systemic	\$115 / 4 oz				drench	drench	drench		
Azoxystrobin 50%			Drench										
KleenGrow	not classified	0.36 - 2.3	Spray	Contact	\$130 / gal				drench?				
Didecyl dimethyl ammonium chloride 7.5%		0.36 - 3.0	Drench										

Review product label for specific instructions before making purchase or application. Red indicates a superior rating in the 2014 SyngentaGuide to Ornamental Fungicides. drench? indicates multisite fungicide so unknown impact on beneficial microflora.

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						<i>Pseudomonas</i>	<i>Phytophthora</i>					<i>Guignardia</i>	
Specialty Fungicides and Bactericides (cont'd)													
Medallion WDG	12	0.25 - 0.5	Spray	Contact	\$200 / 8 fl oz			drench	drench	drench		spray	spray
Fludioxonil 50%		0.13 - 0.3	Drench										
OHP 6672 50 WP (Cleary's 3336 WP)	1	2.5 - 3.3	Spray	Xylem Mobile	\$33 / 2 lb			drench	drench		spray	spray	spray
Thiophanate Methyl 50%		1.6 - 3.3	Drench										
Phyton 35	M1	0.78 - 2.4	Spray	Contact	\$90 / liter	spray	drench?		drench?		spray	spray	spray
Copper Sulfate Pentahydrate 21.27%	M2												
Protect 75 DF	M	1.5 - 2.9	Spray	Contact	\$68 / 6 lb						spray	spray	spray
Mn,Zn,Ethylene bisdithiocarbamate 75%													
Subdue MAXX	4	.03 - .06	Spray	Xylem Mobile	\$180 / qt		drench						
Metalaxyl 21.3%			Drench										
Terraclor 400	14	.36 - .72	Drench	Contact	\$110 / gal				drench	drench			spray
Pentachloronitrobenzene (PCNB) 40.0%													
Terrazole 35 WP	14	0.7 - 1.9	Drench	Contact	\$93 / 2 lb		drench						
Etridiazole 35%													
Thiomyl	1	2.5 - 3.3	Spray	Xylem Mobile	\$23 / 6 oz				drench		spray	spray	spray
Thiophanate Methyl 50%		1.6 - 3.3	Drench										
Truban 25EC	14	0.23 - 0.47	Drench	Contact	\$73 / qt		drench						
Etridiazole 25%													
Combination Specialty Mixtures Fungicides and Bactericides													
Banrot 40WP	1,14	.54 - 1.1	Spray	Xylem Mobile	\$83 / 2 lb		drench	drench	drench	drench	spray	spray	spray
Etridiazole 15% Thiophanate Methyl 25%			Drench										
Pageant	7,11	.46 - .69	Spray	Xylem Mobile	\$103 / 1 lb		drench	drench	drench	drench	spray	spray	spray
Pyraclostrobin 12.8% Boscalid 25.2%			Drench										
Palladium	9, 12	0.21 - 0.43	Spray	Contact	\$360 / 2 lb			spray	spray	spray	spray	spray	spray
Fludioxonil 25%, Cyprodinil 37.5%													
Switch 62.5 WG	9, 12	0.21 - 0.43	Spray	Contact	\$166 / 28 oz			spray	spray	spray	spray	spray	spray
Fludioxonil 25%, Cyprodinil 37.5%													
Zerotol 2.0	nc	0.25-1.28	Spray	Contact	\$130 / gal	spray	drench?	drench?	drench?	drench?			spray
Peroxide 27.1% Peroxyacetic Acid 2.0%		0.43-1.28	Drench										

Note: Notation highlighted in red indicates a very good to excellent rating in the 2014 Guide to Ornamental Fungicides by Syngenta, accessed online at southernag.com/wp-content/uploads/2014/10/Guide-to-Ornamental-Fungicide-Poster.pdf. drench? indicates it is labeled for use as a drench but is a multisite fungicide so unknown impact beneficial microorganisms. Information extract from USA labels, prices based on 2016 survey from pestrong.com and domyownpestcontrol.com. Fungicides over \$200 excluded. Review product label for specific instructions on use and rates before purchasing and making application.

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