

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	Anthrax-nose	Leaf Spots	Botrytis	
						<i>Erwinia Pseudomonas</i>	<i>Pythium Phytophthora</i>	<i>Fusarium</i>	<i>Rhizoctonia</i>	<i>Sclerotium</i>	<i>Colletotrichum</i>	<i>Cercospora Guignardia</i>	<i>Botrytis</i>	
Commonly Available Fungicides and Bactericides														
Captan 50W	M	5	Spray	Contact	\$15 / 8 oz							spray	spray	spray
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						spray	spray	spray
Quaternary Ammonium Chlorides 20%														
Daconil	M5	2.25	Spray	Contact	\$19 / 16 fl oz				spray			spray	spray	spray
Chlorothalonil 29.6%														
Dithane M45, Mancozeb	M	4.5	Spray	Contact	\$13 / 6 oz							spray	spray	spray
Mn,Zn,Ethylene bisdithiocarbamate 80%														
Hydrogen Peroxide	not classified	full strength	Spray	Contact	\$2 / 16 fl oz	spray								
Hydrogen Peroxide 3%														
CuPro 5000 (Kocide discontinued)	M	1.4 - 3.6	Spray	Contact	\$38 / 3 lb	spray			spray			spray	spray	spray
Copper Hydroxide 61.3%														
Liquid Copper	M	2 - 6	Spray	Contact	\$16 / 16 fl oz	spray						spray	spray	spray
Copper Ammonium Complex 31.4%														
SA-20 Disinfectant	not classified	1 - 1.5	Spray	Contact	\$36 / gal	spray						spray	spray	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		drench							spray
Fosetyl aluminum 80%		0.6 - 1.1	Drench											
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											
Chipco 26019	2	1.6	Drench	Contact	\$110 / 2 lb			drench	drench			spray		spray
Iprodione 50%														
Cleary's 3336F	1	0.75 - 1	Spray	Xylem Mobile	\$57 / quart			drench	drench			spray	spray	spray
Thiophanate Methyl 41.25%		0.5 - 0.75	Drench											
Daconil Ultrex	M5	1.75	Spray	Contact	\$67 / 5 lb				spray			spray	spray	spray
Chlorothalonil 82.5%														
Eagle 20EW	3	0.36-0.72	Spray	Locally Systemic	\$190 / gal							spray	spray	
Myclobutanil 19.7%			Drench											
Empress Intrinsic	11	.12 - .36	Drench	Locally Systemic	\$175 / 24 fl oz		drench	drench	drench					
Pyraclostrobin 23.3%														

Note: Review product label for specific instructions on use and rates before making purchasing and making application.

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Specialty Fungicides and Bactericides (cont'd)													
Heritage DF50	11	.09 - .37	Spray	Locally Systemic	\$115 / 4 oz		drench	drench	drench	drench	spray	spray	spray
Azoxystrobin 50%			Drench										
Junction	M1 M3	2.5 - 5.9	Spray	Contact	\$120/6 lb	spray			spray		spray	spray	spray
Mancozeb 15% Copper Hydroxide 46.1%													
KleenGrow	not classified	0.36 - 2.3	Spray	Contact	\$130 / gal	spray		drench?			spray	spray	
Didecyl dimethyl ammonium chloride 7.5%			Drench										
Medallion WDG	12	0.25 - 0.5	Spray	Contact	\$200 / 8 fl oz			drench	drench	drench	spray	spray	spray
Fludioxonil 50%			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%			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										
Phyton 27/Phyton 35	M1 M2	0.78 - 2.4	Spray	Contact	\$90 / liter	spray	drench?	drench?	drench?		spray	spray	spray
Copper Sulfate Pentahydrate 21.36%/21.27%													
Protect 75 DF	M	1.5 - 2.9	Spray	Contact	\$68 / 6 lb						spray	spray	spray
Mn,Zn,Ethylene bisdithiocarbamate 75%													
Spectro 90WDG	1, M5	0.7 - 1.3	Spray	Xylem Mobile	\$78 / 5 lb		drench?				spray	spray	spray
Chlorothalonil 72%, Thiophanate Methyl 18%													
Strike Plus 50 WDG	3, 11	2 - 4	Spray	Contact	\$138 / 1 lb						spray	spray	
Trifloxystrobin 8.33%, Triadimefon 41.67%													
Subdue MAXX	4	.03 - .06	Spray	Xylem Mobile	\$180 / qt		drench						
Metalaxyl 21.3%			Drench										
Switch 62.5 WG, Palladium	9, 12	0.21 - 0.43	Spray	Contact	\$166 / 28 oz			spray	spray	spray	spray	spray	spray
Fludioxonil 25%, Cyprodinil 37.5%													
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	drench		spray	spray	spray
Thiophanate Methyl 50%			Drench										
Truban 25EC	14	0.23 - 0.47	Drench	Contact	\$73 / qt		drench						
Etridiazole 25%													
Zerotol 2.0	nc	2 - 7.5	Spray	Contact	\$130 / gal	spray	drench?	drench?	drench?	drench?			spray
Peroxide 27.1% Peroxyacetic Acid 2.0%			Drench										

Note: Notation highlighted in red indicates a very good to excellent rating in the 2016 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.

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