

# Fungicides and Bactericides for Treatment of Various Orchid Diseases

by Sue Bottom, sbottom15@gmail.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	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>										
<b>Commonly Available Fungicides and Bactericides</b>																							
Captan 50W Captan 50%	M	5	Spray	Contact	\$15 / 8 oz							spray	spray	spray									
Cinnamon Cinnamon	not classified	full strength	Dust	Contact	\$12 / 18 oz																		
Consan 20 (Physan) Quaternary Ammonium Chlorides 20%	not classified	1.5	Spray	Contact	\$23 / 16 fl oz	spray						spray	spray	spray									
Daconil Chlorothalonil 29.6%	M5	2.25	Spray	Contact	\$19 / 16 fl oz				spray			spray	spray	spray									
Dithane M45, Mancozeb Mn,Zn,Ethylene bisdithiocarbamate 80%	M	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																	
CuPro 5000 (Kocide discontinued) Copper Hydroxide 61.3%	M	1.4 - 3.6	Spray	Contact	\$38 / 3 lb	spray			spray			spray	spray	spray									
Liquid Copper Copper Ammonium Complex 31.4%	M	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									
Sulfur Wettable Powder Sulfur 90%	M	12	Dust or Spray	Contact	\$14 / 5 lb																		
<b>Specialty Fungicides and Bactericides</b>																							
Aliette WDG Fosetyl aluminum 80%	M(33)	3.5 - 7.1 0.6 - 1.1	Spray Drench	Amphi- mobile	\$155 / 5 lb	spray	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									
Cleary's 3336F Thiophanate Methyl 41.25%	1	0.75 - 1 0.5 - 0.75	Spray Drench	Xylem Mobile	\$57 / quart			drench	drench			spray	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			spray	spray										
Empress Intrinsic	11	12 - 36	Drench	Locally	\$175 / 24 fl		drench	drench	drench														

Review product label for specific instructions before making purchase or application. Red indicates a superior rating in the 2016 SyngentaGuide to Ornamental Fungicides. drench? indicates multisite fungicide so unknown impact on beneficial microflora.

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						<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>	
Pyraclostrobin 23.3%	11	.12 - .30	Drench	Systemic	oz									
<b>Specialty Fungicides and Bactericides (cont'd)</b>														
Heritage DF50	11	.09 - .37	Spray	Locally Systemic	\$115 / 4 oz		drench	drench	drench	drench	spray	spray	spray	
Azoxystrobin 50%			Drench											
Junction	M1	2.5 - 5.9	Spray	Contact	\$120/6 lb	spray			spray		spray	spray	spray	
Mancozeb 15% Copper Hydroxide 46.1%	M3													
KleenGrow	not classified	0.36 - 2.3	Spray	Contact	\$130 / gal	spray		drench?				spray	spray	
Didecyl dimethyl ammonium chloride 7.5%		0.36 - 3.0	Drench											
Medallion WDG	12	0.25 - 0.5	Spray	Contact	\$200 / 8 fl oz			drench	drench	drench	spray	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											
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 35 (Phyton 27 discontinued)	M1	0.78 - 2.4	Spray	Contact	\$90 / liter	spray	drench?	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%														
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%		1.6 - 3.3	Drench											
Truban 25EC	14	0.23 - 0.47	Drench	Contact	\$73 / qt		drench							
Etridiazole 25%														
Zerotol 2.0	no	0.25-1.28	Spray	Contact	\$120 / gal	spray	drench?	drench?	drench?	drench?			spray	

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						<i>Erwinia Pseudomonas</i> Spray	<i>Pythium Phytophthora</i> drench?	<i>Fusarium</i> drench?	<i>Rhizoctonia</i> drench?	<i>Sclerotium</i> drench?	<i>Colletotrichum</i>	<i>Cercospora Guignardia</i>	<i>Botrytis</i> Spray	
Peroxide 27.1% Peroxyacetic Acid 2.0%	nc	0.43-1.28	Drench	Contact	\$150 / gal									

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