



DISEASE CONTROL Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca

Commercial Ornamentals: Disease Control—Woody Trees Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
INDIAN HAWTHORNE (<i>Rhaphiolepis</i>)				
Anthracnose				
	chlorothalonil + thiophanate-methyl TEE-1-UP CONSYST WDG		1 lb.	Make first application when conditions favor disease and repeat as needed at 7- to 10-day intervals.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	mancozeb JUNCTION	---	1.5 lb.	Apply at first sign of disease and repeat every 7 to 10 days.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals.
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
Entomosporium Leaf Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals. Occurs in late fall through early spring.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	15-30 fl.oz.	See Comments for copper hydroxide, above.
	mancozeb JUNCTION	---	1.5 lb.	Apply at first sign of disease and repeat every 7 to 10 days.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.

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Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
INDIAN HAWTHORNE (Raphiolepis) (cont.)				
Entomosporium Leaf Spot (cont.)				
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	See Comments for copper hydroxide, above
Fireblight				
	copper sulfate pentahydrate PHYTON 27	---	20-40 fl.oz	Apply every 5 to 7 days during bloom until petal fall. Prune blighted twigs. Avoid excess nitrogen fertilizer in spring. Plant resistant cultivars. See Cotoneaster: Fireblight.
	streptomycin sulfate FIRE BLIGHT SPRAY	0.5 t.	8 oz.	See Comments for copper sulfate pentahydrate, above.
Rhizoctonia Web Blight				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals. Occurs primarily during extended periods of hot, wet weather.
	flutolanil CONTRAST 70WSP	---	3-12 oz.	FOLIAR SPRAY: Repeat spray as needed every 14 to 21 days. Tank mix with appropriate surfactant.
	iprodione CHIPCO 26GT	---	1-2.5 qt./A	Hot weather disease on tightly packed plants. Apply every 7 to 14 days when conditions favor disease. Apply at first sign of disease and repeat at 7- to 10-day intervals. NOT FOR RESIDENTIAL USE.
	CHIPCO 26019 50W	---	1-2.5 qt./A	
	IPRODIONE PRO SE	---	1-2.75 qt.	
	SEXTANT 2F OHP 26GT-O	---	1-2.75 qt. 1-2.5 qt.	
	polyoxin D VERANDA O	---	4-8 oz.	Apply to drip before disease develops and when conditions favor disease. Repeat applications every 7 to 10 days as needed.
	AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals. Alternate with a non-Group 19 fungicide for resistance management.
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	FOLIAR SPRAY: Apply to point of drip when conditions favor disease. Repeat every 10 to 14 days as needed.
	trifloxystrobin COMPASS O	---	1-2 oz.	Apply to drip when conditions favor disease. Repeat every 7 to 14 days as needed to control disease. See label for site specific instructions. Use higher rate at shorter interval when disease is severe.
	COMPASS 50W	---	1-2 oz.	

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Commercial Ornamentals: Disease Control—Woody Trees Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
INDIAN HAWTHORNE (Raphiolepis) (cont.)				
Entomosporium Leaf Spot (cont.)				
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
JUNIPER				
Cedar Rust Diseases				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply May through September at 7- to 28-day intervals.
	myclobutanil EAGLE 40W EAGLE 20EW	---	3-6 oz. 8 fl.oz.	Apply May through September at 10- to 14-day in-tervals. Add a nonphytotoxic surfactant to improve spray coverage and fungicide performance. Eagle is cleared for landscape use.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	triadimefon BAYLETON T/O STRIKE 25W	---	1-2 oz. 1-2 oz.	Bayleton is cleared for landscape use only.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in greenhouse, nursery, and interiorscapes.
Phomopsis Twig Blight				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	bordeaux mixture	6 T.	---	Prune damaged shoots. Spray at 7- to 10-day intervals during humid summer weather. Use surfactant to improve coverage of foliage. Resistant varieties are available.
	copper hydroxide CUPRO 2005 T/N/O	1.5 t.	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	13-25 fl.oz	Apply at first sign of disease and repeat every 7 to 14 days as needed to control disease. Use higher rate at shorter intervals when disease is severe.
	mancozeb DITHANE M-45 80W 4 FLOWABLE MANCOZEB FORE 80W FORE FLOWABLE JUNCTION MANCOZEB DG PROTECT T/O 80W	3 t. --- 3 t. --- --- 1.5-3 t. 3 t.	1.5 lb. 1.2 qt. 1.5 lb. 1.2 qt. 1.5 lb. 1-2 lb. 1.5 lb.	Prune damaged shoots. Spray at 7- to 10-day intervals during humid summer weather. Use surfactant to improve coverage of foliage. Resistant varieties are available.

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		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
JUNIPER (cont.)				
Phomopsis Twig Blight (cont.)				
	propiconazole BANNER MAXX	---	5-8 fl.oz.	Prune damaged shoots. Spray at 7- to 10-day intervals during humid summer weather. Apply as needed to drip. Use surfactant to improve coverage of foliage. Resistant varieties are available. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	PROPENSITY 1.3ME	---	6-8 fl.oz.	
	STRIDER	---	5-8 fl.oz.	
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Prune damaged shoots. Spray at 7- to 10-day intervals during humid summer weather. Apply as needed to drip. Use surfactant to improve coverage of foliage. Resistant varieties are available.
	3336 50W	2.33-4 t.	12-16 oz.	
	OHP 6672 50W	---	12-16 oz.	
	HALT 50W	2.5 t.	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	FOLIAR SPRAY: Apply to point of drip when conditions favor disease. Repeat every 10 to 14 days as needed.
	thiophanate-methyl + iprodione 26/36 FUNGICIDE	---	33-84 fl.oz./A	Use sufficient water to thoroughly cover the leaves and stems. Reapply at 7- to 14-day intervals as needed. Use higher rate at shorter interval when disease is present. NOT FOR RESIDENTIAL USE.
Phytophthora Root Rot				
	copper sulfate pentahydrate PHYTON 27	---	15-25 fl.oz.	Use sufficient volume of water to thoroughly cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease.
	dimethomorph STATURE DM	---	6.4-12.8 oz.	DRENCH: Apply when roots are well established or at first sign of disease. Repeat applications at 10- to 14-day intervals through production cycle. Apply sufficient water to wet the root zone.
		---	6.4-12.8 oz.	FOLIAR SPRAY: Apply in sufficient water to thoroughly wet the leaves and stems. Repeat applications at 10- to 14-day intervals through production cycle.
	etr Diazole TERRAZOLE 35W	See Comments.		See Azalea: Phytophthora Root Rot.
	TRUBAN 5G			
	TRUBAN 25E			
	TRUBAN 30W			
	etr Diazole + thiophanate- methyl BANROT 8G	See Comments.		See Azalea: Phytophthora Root Rot.
	BANROT 40W			
	fosetyl-Al ALIETTE WDG	See Comments.		See Andromeda: Phytophthora Root Rot.
	mefenoxam SUBDUE GR	See Comments.		See Andromeda: Phytophthora Root Rot.
	SUBDUE MAXX			
	MEFENOXAM 2			
	propamocarb BANOL 67S	See Comments.		See Andromeda: Phytophthora Root Rot.
	PROPLANT			

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Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
JUNIPER (cont.)				
Phytophthora Root Rot (cont.)				
	Streptomyces griseoviridis K61 MYCOSTOP	---	1.4 oz.	SUPPRESSION OF PHYTOPHTHORA ROOT ROT: Use in conjunction with other root rot fungicides. DO NOT tank mix with any pesticide. SOIL DRENCH: Apply 20 to 40 gallons of suspension to 800 square feet of bench, container, or bed area. Irrigate to saturate potting medium or soil. Repeat every 3 to 6 weeks as needed.
		---	5 g/1.3 gal.	SOIL SPRAY: Apply 2 to 4 gallons in a proportioner, injector, or sprayer to 800 square feet of bench, container, or bed area. Irrigate to improve soil penetration. Repeat every 3 to 6 weeks as needed.
		---	5 g/1.3 gal.	TRANSPLANT DIP: Dip roots shortly before planting.
	<i>Trichoderma harzianum</i> Strain KRL-AG2 ROOT SHIELD	---	1-1.5 lb./cu.yd.	DRY SOIL MIX IN NURSERY AND GREENHOUSE: Thoroughly incorporate granules during mix preparation or pot filling. See label for compatibility with other fungicides and insecticides.
LANTANA				
Foliar Nematode				
	See Comments.	---	---	Destroy nematode-infested container plants.
LAUREL (Cherry)				
Bacterial Leaf Spot				
	copper sulfate TRIBASIC COPPER SULFATE	---	5 lb.	Apply at budbreak. Repeat at 7- to 14-day intervals. Shorten spray interval during wet weather. Avoid overhead irrigation late in evening or at night.
	copper sulfate pentahydrate PHYTON 27	---	20-35 fl.oz.	See Comments for copper sulfate, above.
	elemental sulfur	---	6 lb.	Apply at budbreak. Repeat at 7- to 14-day intervals. Shorten spray interval during wet weather. Avoid overhead irrigation late in evening or at night.
	zinc sulfate + hydrated lime	---	1.6 lb. + 5 lb.	
Coryneum Blight				
	chlorothalonil DACONIL ULTREX	---	1.4 lb.	Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	

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LAUREL (Mountain)					
Leaf Spot					
	chlorothalonil			Apply at budbreak. Repeat at 10- to 14-day intervals until foliage matures. Destroy fallen leaves.	
	CONCORDE DF	---	1.4 lb.		
	DACONIL ULTREX	---	1.4 lb.		
	DACONIL WEATHER STIK 6F	---	1.38 pt.		
	DACONIL ZN	2 t.	2 pt.		
	ECHO ULTIMATE	---	1.25 lb.		
	FUNG-ONIL	2.25 t.	---		
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---		
	chlorothalonil + fenarimol				Apply at budbreak. Repeat at 10- to 14-day intervals until foliage matures. Destroy fallen leaves.
	TWOSOME 4.4F	2 t.	2 pt.		
	mancozeb			Apply at budbreak. Repeat at 10- to 14-day intervals until foliage matures. Destroy fallen leaves.	
	DITHANE T/O	2 t.	1.5 lb.		
	FORE FLO 37F	---	1.2 qt.		
	FORE FLOWABLE	---	1.2 qt.		
	MANCOZEB DG	1.5-3 t.	1-2 lb.		
	PROTECT T/O 80W	2 t.	1.5 lb.		
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.	
	EAGLE 20EW	---	6-12 fl.oz.		
	SYSTHANE WSP	---	3-6 oz.		
	thiophanate-methyl			Apply at budbreak. Repeat at 10- to 14-day intervals until foliage matures. Destroy fallen leaves.	
	3336 4.5F	0.5-1.25 t.	10-20 fl.oz.		
	3336 50W	2.33-4 t.	12-16 oz.		
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.		
	triadimefon			Bayleton is cleared for landscape use only. Apply Systemic Fungicide For Turf as a full cover spray when symptoms first appear and repeat every 7 to 14 days.	
	BAYLETON T/O	---	1-2 oz.		
	IMMUNOX	2 T.	---		
	STRIKE 25W	---	1-2 oz.		
	SYSTEMIC FUNGICIDE FOR TURF AND ORNAMENTALS	1-2 T.	---		

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Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
LEUCOTHOE				
Cylindrocladium Leaf Spot				
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t.	16-20 fl.oz. 12-16 oz. 16-20 fl.oz.	SOIL DRENCH: Repeat at 14- to 21-day intervals. Avoid overhead irrigation and follow recommended sanitation practices.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
	triflumizole TERRAGUARD 50W	See Comments.		See Azalea: Cylindrocladium Root Rot.
Powdery Mildew				
	chlorothalonil + thiophanate-methyl TEE-1-UP	---	1 lb.	Make first application when conditions favor disease and repeat as needed at 7- to 10-day intervals
	paraffinic oil SUNSPRAY ULTRA FINE OIL	2.5-5 T.	1% v/v	Apply at first sign of disease and reapply every 1 to 2 weeks. Do not apply when temperatures exceed 85°F.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F 3336 50W HALT 50W OHP 6672 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 1.5 t. --- 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. --- 12-16 oz. 10-20 fl.oz.	Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	triadimefon BAYLETON T/O STRIKE 25W	--- ---	1-2 oz. 1-2 oz.	Bayleton is cleared for landscape use only.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.

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Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
LEYLAND CYPRESS				
Cercospora Needle Blight				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Spray to drip. Repeat as needed at 7- to 28-day intervals.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	13-25 fl.oz	Apply at first sign of disease and repeat every 7 to 14 days as needed to control disease. Use higher rate at shorter intervals when disease is severe.
	propiconazole BANNER MAXX	---	8-12 fl.oz.	Apply every 30 days when conditions favor disease. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	PROPENSITY 1.3ME	---	6-8 fl.oz.	
	pyraclostrobin INSIGNIA	---	2-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	thiophanate-methyl 3336 4.5F	1.5-1.25 t.	10-20 fl.oz.	Apply at 7- to 10-day intervals during humid and wet summer weather. Apply to drip and add a surfactant to improve coverage of WP formulations.
	3336 50W	2.5 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	See Comments for thiophanate-methyl, above.
	thiophanate-methyl + mancozeb ZYBAN 79W	---	3 lb.	See Comments for thiophanate-methyl, above.
	triadimefon STRIKE 25W	---	4 oz.	Apply in sufficient water to cover foliage. Begin applications before disease appears in spring and repeat at 60-day intervals. Strike is labeled for nursery use only.
Seiridium, Botryosphaeria Canker				
	None	See Comments.		Both of these diseases are favored by stress due to off-site establishment, overcrowding, and drought. Proper establishment and maintenance practices will minimize the onset of disease. Prune out dying limbs and remove dying trees.
Phytophthora Root Rot				
	etridiazole TERRAZOLE 35W		See Comments.	See Azalea: Phytophthora Root Rot.
	TERRAZOLE L			
	TRUBAN 30W			
	TRUBAN 5G			

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Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
LEYLAND CYPRESS (cont.)				
Phytophthora Root Rot (cont.)				
	etr Diazole + thiophanate-methyl BANROT 8G BANROT 40W			See Azalea: Phytophthora Root Rot. See Comments.
	fosetyl-AI ALIETTE WDG			See Andromeda: Phytophthora Root Rot.
	mefenoxam SUBDUE GR SUBDUE MAXX			See Andromeda: Phytophthora Root Rot.
	propamocarb BANOL 67S PROPLANT			See Andromeda: Phytophthora Root Rot.
LILAC				
Anthraco-nose				
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	trifloxystrobin COMPASS O COMPASS 50W	--- ---	2-4 oz. 2-4 oz.	Apply to drip when conditions favor disease. Repeat applications at 7- to 14-day intervals as needed to control disease. See label for site specific instructions. Use higher rate at shorter interval when disease is severe.
Bacterial Blight				
	bordeaux mixture	8 T.	---	Prune diseased shoots and avoid excessive use of nitrogen fertilizers. Apply at first sign of disease in early spring. Repeat at 7- to 10-day intervals.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	13-25 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	mancozeb JUNCTION	---	1.5 lb.	Apply at first sign of disease and repeat every 7 to 10 days.
Cercospora Leaf Spot				
	chlorothalonil DACONIL ULTREX DACONIL WEATHER STIK 6F	--- --- ---	1.4 lb. 1.38 pt.	Apply at first sign of symptoms. Repeat at 10- to 14-day intervals.
	DACONIL ZN ECHO 720 LANDSCAPE AND GARDEN FUNGICIDE	2 t. --- 2 T.	2 pt. 1.38 pt. ---	

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LILAC (cont.)				
Cercospora Leaf Spot (cont.)				
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.
	mancozeb JUNCTION PROTECT T/O	---	1.5 lb. 1.5 lb.	Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. 10-20 fl.oz.	See Comments for chlorothalonil, above.
Powdery Mildew				
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	Apply at first sign of disease on leaves and repeat as needed every 7 to 14 days.
	copper sulfate pentahydrate PHYTON 27	---	15-25 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	kresoxim-methyl CYGNUS	---	1.6-3.2 oz.	Apply as protective spray at 10- to 14-day intervals. Apply higher rate at shorter interval when conditions favor disease.
	myclobutanil EAGLE 20EW IMMUNOX SYSTHANE WSP	---	6-12 fl.oz. --- 3-6 oz.	Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	paraffinic oil SUNSPRAY ULTRA FINE OIL	2.5-5 T.	1% v/v	Apply at first sign of disease and reapply every 1 to 2 weeks. Do not apply when temperatures exceed 85°F.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	propiconazole BANNER MAXX PROPENSITY 1.3ME	---	8-12 fl.oz. 6-8 fl.oz.	Apply at first sign of disease. Apply as needed to drip.. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	pyraclostrobin INSIGNIA	---	4-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	sulfur ORTHONIX 95W	2 T.	---	Apply at first sign of disease. Repeat at 7- to 14-day intervals.

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Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
LILAC (cont.)				
Powdery Mildew (cont.)				
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	1.5 t.	---	
	OHP 6672 50W	---	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	triadimefon BAYLETON T/O STRIKE 25W	---	1-2 oz.	Bayleton is cleared for landscape use only; Strike is labeled for nursery use.
	trifloxystrobin COMPASS O	---	1-2 oz.	Apply at first sign of disease. Repeat applications at 7- to 14-day intervals as needed to control disease.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
	triforine ROSE AND SHRUB DISEASE CONTROL	1 T.	---	Apply at first sign of disease and repeat every 7- to 10 days as needed.
Rhizoctonia Web Blight				
	polyoxin D VERANDA O	---	4-8 oz.	Apply to drip before disease develops and when conditions favor disease. Repeat applications every 7 to 10 days as needed.
	AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals. Alternate with a non-Group 19 fungicide for resistance management.
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
LIRIOPE (Monkey Grass)				
Anthracnose				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
LIRIOPE (Monkey Grass) (cont.)				
Anthracnose (cont.)				
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Remove diseased leaves. Apply at first sign of dis-ease. Repeat at 10- to 14-day intervals.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	Remove diseased leaves. Apply at first sign of disease. Repeat at 10- to 14-day intervals.
LOQUAT				
Entomosporium Leaf Spot				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Apply every 7 to 10 days beginning at budbreak until new growth matures. Add a spreader-sticker to improve coverage of foliage.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply at budbreak and repeat sprays at 7- to 14-day intervals. Shorten spray interval during wet, cloudy weather.
	3336 50W	2.33-4 t.	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	See Comments for thiophanate-methyl, above.
Fireblight				
	copper sulfate pentahydrate PHYTON 27	---	20-40 fl.oz.	Apply at budbreak and repeat every 7 to 14 days until petal fall.
LOROPETALUM				
Cercospora Leaf Spot				
	pyraclostrobin INSIGNIA	---	2-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
MAGNOLIA				
Algal Leaf Spot				
	bordeaux mixture	8 T.	8 lb.	Apply at budbreak and repeat at 1-month intervals until foliage matures.
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
Bacterial Leaf Spot				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	15-30 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	mancozeb JUNCTION	---	1.5 lb.	Apply at first sign of disease and repeat every 7 to 10 days.
Leaf Spot, Anthracnose				
	azoxystrobin HERITAGE 50DG	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	chlorothalonil CONCORDE DF	---	1.4 lb.	Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	ECHO 720	---	1.38 pt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	
	TEE-1-UP	---	1 lb.	See Comments for chlorothalonil, above.
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	mancozeb DITHANE T/O	3 t.	1.5 lb.	Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	4 FLOWABLE MANCOZEB	---	1.2 qt.	
	FORE FLOWABLE JUNCTION	---	1.2 qt. 1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
	PROTECT T/O 80W	3 t.	1.5 lb.	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
MAGNOLIA (cont.)				
Leaf Spot, Anthracnose (cont.)				
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	3336 50W	2.33-4 t.	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
Powdery Mildew				
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	Apply at first sign of disease on leaves and repeat as needed every 7 to 14 days. Occurs on saucer or Japanese magnolia but not Southern magnolia.
	TEE-1-UP	---	0.75-1 lb.	
	copper sulfate pentahydrate PHYTON 27	---	15-30 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	thiophanate-methyl 3336 50W	2.33-6 t.	12-24 oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	HALT 50W	1.5 t.	---	
	OHP 6672 50W	---	12-24 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
Root Rot				
	etridiazole TRUBAN 5G TERRAZOLE 35W TERAZOLE L	See Comments.		See Azalea: Phytophthora Root Rot.
	fosetyl-AI ALIETTE WDG	See Comments.		See Azalea: Phytophthora Root Rot.
	propamocarb BANOL 67S PROPLANT	See Comments.		See Azalea: Phytophthora Root Rot.
MAHONIA				
Leaf Spot				
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Pick off diseased leaves. Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
MAHONIA (cont.)				
Rust				
	chlorothalonil DACONIL ULTREX DACONIL WEATHER STIK 6F DACONIL ZN ECHO ULTIMATE LANDSCAPE AND GARDEN FUNGICIDE	--- --- 2 t. --- 2 T.	1.4 lb. 1.38 pt. 2 pt. 1.25 lb. ---	Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.
MAPLE				
Anthraco-nose, Leaf Spot, Tar Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	bordeaux mixture	8 T.	---	Fungicide sprays are impractical except for valuable specimen trees. Apply as leaves unfurl. Repeat at 10- to 14-day intervals. Destroy diseased leaves.
	chlorothalonil DACONIL ULTREX DACONIL WEATHER STIK 6F ECHO 720 LANDSCAPE AND GARDEN FUNGICIDE	--- --- 2 T.	1.4 lb. 1.3 pt. 1.38 pt. ---	
	chlorothalonil + thiophanate-methyl SPECTRO 90 CONSYST WDG TEE-1-UP	--- --- ---	1-2 lb. 1 lb. 1 lb.	See comments for Bordeaux mixture.
	mancozeb DITHANE T/O 4 FLOWABLE MANCOZEB FORE 80W FORE FLOWABLE JUCTION MANCOZEB DG PROTECT T/O 80W	3 t. --- 3 t. --- --- 1.5-3 t. 3 t.	1.5 lb. 1.2 qt. 1.5 lb. 1.2 qt. 1.5 lb. 1-2 lb. 1.5 lb.	Fungicide sprays are impractical except for valuable specimen trees. Apply as leaves unfurl. Repeat at 10- to 14-day intervals. Destroy diseased leaves.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals.
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
MAPLE (cont.)				
Anthracnose, Leaf Spot, Tar Spot (cont.)				
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Fungicide sprays are impractical except for valuable specimen trees. Apply as leaves unfurl. Repeat at 10- to 14-day intervals. Destroy diseased leaves.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	See Comments for thiophanate-methyl, above.
	trifloxystrobin COMPASS O	---	2-4 oz.	Apply to drip when conditions favor disease. Repeat applications at 7- to 14-day intervals as needed to control disease. See label for site specific instructions. Use higher rate at shorter interval when disease is severe.
	COMPASS 50W	---	2-4 oz.	
Phytophthora Root Rot				
	etridiazole TERRAZOLE 35W TERRAZOLE L TRUBAN 30W TRUBAN 5G		See Comments.	See Azalea: Phytophthora Root Rot.
	etridiazole + thiophanate-methyl BANROT 8G BANROT 40W		See Comments.	See Azalea: Phytophthora Root Rot.
	fosetyl-AI ALIETTE T/O	---	See Comments.	See Azalea: Phytophthora Root Rot.
	mefenoxam SUBDUE GR SUBDUE MAXX	See Comments.		See Azalea: Phytophthora Root Rot.
	propamocarb BANOL 675 PROPLANT		See Comments.	See Azalea: Phytophthora Root Rot.
Verticillium Wilt				
	None labeled	See Comments.		Remove infected trees. Replant with wilt-resistant trees or shrubs. See Annuals And Bedding Plants: Soil Pasteurization/Fumigation.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
NANDINA				
Cercospora Leaf Spot				
	chlorothalonil DACONIL ULTREX	---	1.4 lb.	Apply at first sign of disease and repeat sprays as needed every 10 to 14 days.
	DACONIL WEATHER STIK 6F	1.5 lb.	1.4 qt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply at first sign of disease and repeat sprays as needed every 10 to 14 days.
	3336 50W	2.33-4 t.	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
Mosaic Virus				
	None labeled	See Comments.		Viruses spread during propagation. Take cuttings from virus-indexed plants ONLY . Destroy diseased plants.
OAK				
Algal Leaf Spot				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
OAK (cont.)				
Anthracnose				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	bordeaux mixture	8 T.	---	Foliar sprays not necessary except on valuable specimen trees. Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	chlorothalonil CONCORDE DF	---	1.4 lb.	Red Group Only: Foliar sprays not necessary except on valuable specimen trees. Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	ECHO ULTIMATE	---	1.25 lb.	
	FUNG-ONIL	2.25 t.	---	
	GARDEN FUNGICIDE LANDSCAPE AND GARDEN FUNGICIDE	2.25 t. 2 T.	---	
	chlorothalonil + fenarimol TWSOME 4.4F	2 t.	2 pt.	Red Group Only: Foliar sprays not necessary except on valuable specimen trees. Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	chlorothalonil + thiophanate- methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
	TEE-1-UP	---	1 lb.	
	copper sulfate pentahydrate PHYTON 27	---	35 fl.oz.	Use sufficient volume of water to thoroughly cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease.
	mancozeb DITHANE T/O	3 t.	1.5 lb.	Foliar sprays not necessary except on valuable specimen trees. Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	FORE 80W	3 t.	1.5 lb.	
	FORE FLOWABLE	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Foliar sprays not necessary except on valuable specimen trees. Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	OHP 6672 50W	---	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
OAK (cont.)				
Hypoxyylon Canker				
	None labeled	See Comments.		Maintain plant vigor. Remove diseased limbs or trees.
Mushroom Root Rot				
	None labeled	See Comments.		Develops on stressed or declining trees. Remove diseased trees and stumps.
Oak Leaf Blister				
	bordeaux mixture	8 T.	---	Foliar sprays not necessary except on valuable specimen plants. Make one spray at budswell. Quite common in landscape.
	chlorothalonil			Foliar sprays not necessary except on valuable specimen plants. Make one spray at budswell. Quite common in landscape.
	CONCORDE DF	---	1.4 lb.	
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	ECHO ULTIMATE	---	1.25 lb.	
	FUNG-ONIL	2.25 t.	---	
	GARDEN FUNGICIDE	2.25 t.	---	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	mancozeb			Foliar sprays are not necessary except on valuable specimen plants. Make one spray at budswell. Quite common in landscape.
	DITHANE T/O	3 t.	1.5 lb.	
	FORE 80W	3 t.	1.5 lb.	
	FORE FLOWABLE	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
Powdery Mildew				
	azoxystrobin			Apply at first sign of disease and repeat at 14- to 28-day intervals.
	HERITAGE 50W	---	1-4 oz.	
	chlorothalonil + thiophanate-methyl			Apply at first sign of disease on leaves and repeat as needed every 7 to 14 days.
	SPECTRO 90	---	1-2 lb.	
	kresoxim-methyl			Apply as protective spray at 10- to 14-day intervals. Apply higher rate at shorter interval when conditions favor disease.
	CYGNUS	---	1.6-3.2 oz.	
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	EAGLE 20EW	---	6-12 fl.oz.	
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	paraffinic oil			Apply at first sign of disease and reapply every 1 to 2 weeks. Do not apply when temperatures exceed 85°F.
	SUNSPRAY ULTRA FINE OIL	2.5-5 T.	1% v/v	
	polyoxin D			Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	AFFIRM WDG	---	0.25-0.5 lb.	
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
OAK (cont.)				
Powdery Mildew (cont.)				
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Quite common in landscape. Foliar sprays usually are not necessary. Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	3336 50W	2.33-4 t.	12-24 oz.	
	HALT 50W	1.5 t.	---	
	OHP 6672 50W	---	12-24 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	triadimefon BAYLETON T/O	---	1-2 oz.	See Comments for thiophanate-methyl, above. Bayleton is cleared for landscape use only.
	STRIKE 25W	---	1-2 oz.	
	triflumizole TERRAGUARD SC	---	4-16 fl.oz.	Begin applications when conditions favor disease development. Repeat as needed every 7 to 14 days. Use higher rate at shorter intervals when disease is present.
Rust				
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
Wetwood				
	None labeled	See Comments.		Install drain tube.
PACHYSANDRA				
Volutella Blight				
	chlorothalonil DACONIL ULTREX	---	1.4 lb.	Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	ECHO ULTIMATE	---	2.25 lb.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + thiophanate- methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	13-25 fl.oz	Apply at first sign of disease and repeat every 7 to 14 days as needed to control disease. Use higher rate at shorter intervals when disease is severe.
	mancozeb DITHANE M-45 80W	---	4 lb.	SOIL DRENCH: Covers 10,000 square feet of bed. Apply at first sign of disease. Repeat at least five times at 10- to 14-day intervals. Apply Junction at first sign of disease and repeat every 7 to 10 days.
	FORE 80W	---	4 lb.	
	JUNCTION	---	1.5 lb.	
	PROTECT T/O 80W	---	4 lb.	
PEACH (Flowering)				
Bacterial Canker				
	None labeled	See Comments.		Maintain good growing conditions. Destroy diseased plants. Related to cold injury.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PEACH (Flowering) (cont.)				
Bacterial Leaf Spot, Bacterial Blight				
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate TRIBASIC COPPER SULFATE 53W	---	3 lb.	See Comments for copper hydroxide, above.
Blossom and Twig Blight (Brown Rot)				
	captan ORTHOXIDE 50W	2 T.	2 lb.	Apply at early bloom, full bloom, and petal fall.
	chlorothalonil BRAVO WEATHERSTIK 6F	---	1.5 pt. 1.4 lb.	See Comments for captan, above.
	CONCORDE DF	2.25 t.	2 pt.	
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL ZN	2 t.	2 pt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. 10-20 fl.oz.	Apply at early bloom, full bloom, and petal fall.
Gummosis (Botryphaeria Canker)				
	None labeled	See Comments.		Prune trees from February to April only. Disinfest pruning shears with alcohol or other germicidal soap. Discard or burn all pruned wood.
Leaf Curl				
	chlorothalonil CONCORDE DF DACONIL ULTREX DACONIL WEATHER STIK 6F	---	1.4 lb. 1.4 lb. 1.38 pt.	Apply at leaf fall in autumn or in late winter before budswell and budbreak.
	DACONIL ZN	2 t.	2 pt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	copper hydroxide CUPRO 2005 T/N/O	1 T.	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate TRIBASIC COPPER SULFATE 53W	---	4-5 lb.	DORMANT SPRAY: Apply at leaf fall in autumn.
Phoney Peach				
	None labeled	See Comments.		No control for disease. Insecticides for control of leafhopper vector may slow disease spread. Remove damaged trees.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
PEACH (Flowering) (cont.)				
Shot Hole (Coryneum Blight)				
	captan ORTHOCLIDE 50W	2.5 t.	2 lb.	Apply at pink bud, full bloom, petal fall, and before leaf drop.
	chlorothalonil CONCORDE DF	---	1.4 lb.	Apply at leaf fall in autumn or in late winter before budswell and budbreak.
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN LANDSCAPE AND GARDEN FUNGICIDE	2 t. 2 T.	2 pt. ---	
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate TRIBASIC COPPER SULFATE 53W	---	3 lb.	DORMANT SPRAY: Apply at leaf fall in autumn.
PEAR (Flowering)				
Cedar Rust Diseases				
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.
	myclobutanil EAGLE 20EW	---	6-12 fl.oz.	Apply at first sign of disease and repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Eagle is cleared for landscape use only.
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
Entomosporium Leaf Spot				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.
	myclobutanil EAGLE 20EW	---	6-12 fl.oz.	Apply at 10- to 14-day intervals. Add a nonphytotoxic adjuvant to improve coverage and fungicide performance. Eagle is cleared for landscape use only.
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
PEAR (Flowering) (cont.)				
Entomorphorium Leaf Spot (cont.)				
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Begin sprays at budbreak and repeat at 7- to 14-day intervals until foliage matures. Shorten spray interval during wet, cloudy weather.
	3336 50W	2.33-4 t.	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	See Comments for thiophanate-methyl, above.
Fireblight				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	20-40 fl.oz	Apply every 5 to 7 days during bloom until petal fall. Prune blighted twigs. Avoid excess nitrogen fertilizer in spring.
	streptomycin AGRIMYCIN 17.1W FIRE BLIGHT SPRAY	0.75 t.	0.5 lb. (100 ppm)	Apply every 3 to 4 days during bloom and every 5 to 7 days after bloom when the weather favors disease spread.
PERENNIAL VINCA				
Phoma Stem Rot, Anthracnose				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.
Leaf Spot, Anthracnose				
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
Rhizoctonia Web Blight				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at 14- to 28-day intervals when conditions favor disease. Summer disease occurs during periods of hot, wet weather.
	mancozeb PROTECT T/O	3 t.	1.5 lb.	Apply every 7 to 10 days as needed. Add a spreader-sticker to improve coverage of foliage.
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PERENNIAL VINCA (cont.)				
Rhizoctonia Web Blight (cont.)				
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply in mid to late summer at 7- to 14-day intervals. Occurs in densely planted beds during hot, wet weather.
	3336 50W	2.33-4 t.	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
PHOTINIA (Red Tip or Red Top)				
Anthracnose				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	chlorothalonil + thiophanate-methyl SPECTRO 90 CONSYST WDG	---	1-2 lb. 1 lb.	See Comments for chlorothalonil, above.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	mancozeb JUNCTION PROTECT T/O	---	1.5 lb. 1.5 lb.	Apply at 7- to 10-day intervals as needed. Add a spreader-sticker to improve coverage of foliage.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply at 7- to 10-day intervals as needed. Add a spreader-sticker to improve coverage of foliage.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	OHP 6672 50W	---	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	
Bacterial Leaf Spot				
	copper sulfate pentahydrate PHYTON 27	---	15-30 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments	
		Per Gallon	Per 100 Gallons		
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca					
PHOTINIA (Red Tip or Red Top) (cont.)					
Entomosporium Leaf Spot					
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at budbreak. Repeat applications at 14- to 28-day intervals until all growth has stopped. Fall treatments may also be needed.	
	chlorothalonil CONCORDE DF	---	1.4 lb.	Apply at budbreak. Repeat sprays at 7- to 14-day intervals until foliage matures. Protect new growth in fall. Shorten spray interval to 7 days during periods of wet weather on diseased plants. Remove fallen diseased leaves and avoid overhead irrigation.	
	DACONIL ULTREX	---	1.4 lb.		
	DACONIL WEATHER STIK 6F	---	1.38 pt.		
	DACONIL ZN	2 t.	2 pt.		
	ECHO ULTIMATE	---	1.25 lb.		
	FUNG-ONIL	2.25 t.	---		
	GARDEN FUNGICIDE	2.25 t.	---		
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---		
	chlorothalonil + fenarimol TWSOME 4.4F	2 t.	2 pt.		See Comments for chlorothalonil, above.
	chlorothalonil + thiophanate- methyl SPECTRO 90	---	1-2 lb.		See Comments for chlorothalonil, above.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PHOTINA (Red Tip or Red Top) (cont.)				
Entomosporium Leaf Spot (cont.)				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	15-30 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	mancozeb DITHANE T/O	3 t.	1.5 lb.	Apply at budbreak. Repeat sprays at 7- to 14-day intervals until foliage matures.
	4 FLOWABLE MANCOZEB	---	1.2 qt.	Protect new growth in fall. Shorten spray interval to 7 days during periods of wet weather on diseased plants. Remove fallen diseased leaves and avoid overhead irrigation.
	FORE 80W FORE FLOWABLE	3 t. ---	1.5 lb. 1.2 qt.	
	JUNCTION MANCOZEB DG	---	1.5 lb.	
	PROTECT T/O 80W	1.5-3 t. 3 t.	1-2 lb. 1.5 lb.	
	myclobutanil EAGLE 20EW	---	6-12 fl.oz.	Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	propiconazole BANNER MAXX	---	5-8 fl.oz.	Apply at budbreak. Repeat sprays at 7- to 14-day intervals until foliage matures.
	PROPENSITY 1.3ME	---	6-8 fl.oz.	Apply as needed to drip. Protect new growth in fall. Shorten spray interval to 7 days during periods of wet weather on diseased plants. Remove fallen diseased leaves and avoid overhead irrigation. of disease. Apply as needed to drip. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	SYSTEMIC FUNGICIDE	3 T.	1.5 fl.oz	
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	triadimefon BAYLETON T/O	---	1-2 oz.	Bayleton is cleared for landscape use only; Strike is labeled for nursery use.
	STRIKE 25W	---	1-2 oz.	
	triforine ROSE AND SHRUB DISEASE CONTROL	1 T.	---	See Comments for thiophanate-methyl + mancozeb, above.
Mushroom Root Rot				
	None labeled	See Comments.		Maintain plant vigor and avoid drought stress. Remove diseased trees.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PHOTINA (Red Tip or Red Top) (cont.)				
Powdery Mildew				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 7- to 28-day intervals. May be a problem on <i>P. serrulata</i> ; not on red-tip photinia.
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	Apply at first sign of disease on leaves and repeat as needed every 7 to 14 days.
	TEE-1-UP	---	0.75-1 lb.	
	fenarimol RUBIGAN AS	---	6-10 fl.oz.	Apply at first sign of disease. Repeat every 7 to 14 days. Use higher rate and shorter interval when disease is severe and conditions favor disease.
	myclobutanil EAGLE 20EW	---	6-12 fl.oz.	Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	paraffinic oil SUNSPRAY ULTRA FINE OIL	2.5-5 T.	1% v/v	Apply at first sign of disease and reapply every 1 to 2 weeks. Do not apply when temperatures exceed 85°F.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply at first sign of disease. Repeat every 7 to 14 days. Use higher rate and shorter interval when disease is severe and conditions favor disease.
	3336 50W	2.33-4 t.	12-24 oz.	
	HALT 50W	1.5 t.	---	
	OHP 6672 50W	---	12-24 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	triadimefon BAYLETON T/O	---	1-2 oz.	Bayleton is cleared for landscape use only.
	STRIKE 25W	---	1-2 oz.	
	trifloxystrobin COMPASS O	---	1-2 oz.	Apply to point of drip when disease is detected or when conditions favor disease. Repeat every 7 to 14 days until threat of outbreak is over.
	triforine ROSE AND SHRUB DISEASE CONTROL	1 T.	---	Apply at budbreak. Repeat sprays at 7- to 14-day intervals until foliage matures. Protect new growth in fall. Shorten spray interval to 7 days during periods of wet weather on diseased plants. Remove fallen diseased leaves and avoid overhead irrigation.
Root Rot				
	etridiazole + thiophanate-methyl BANROT 8G	See Comments.		See Azalea: Phytophthora Root Rot.
	BANROT 40W			
	mefenoxam SUBDUE GR	See Comments.		See Andromeda: Phytophthora Root Rot.
	SUBDUE MAXX			

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PHOTINA (Red Tip or Red Top) (cont.)				
Root Rot (cont.)				
	potassium salts of phosphorous acid ALUDE	0.3-0.67 fl.oz.	1-2 qt.	FOLIAR SPRAY: Apply to thoroughly wet foliage and repeat every 14 to 21 days as needed.
		---	6.67-12.67 fl.oz.	DRENCH: Apply 25 gallons of solution to 100 square feet of bed area and repeat monthly as needed.
	propamocarb BANOL 67S PROPLANT	See Comments.		See Azalea: Phytophthora Root Rot.
PINE				
Eastern Gall Rust				
	None labeled	See Comments.		Prune out galls in spring. Seen on mature Virginia pines.
Fusiform Rust (Loblolly and Slash pine)				
	triadimefon BAYLETON T/O STRIKE 25W	---	8 oz. 8 oz.	NURSERY: Apply Strike 25W to run-off in early spring and repeat at 2- to 3-week intervals. Not effective on trees in landscape. LANDSCAPE: Remove trees with trunk cankers and prune galled limbs. DO NOT fertilize until trees are 8 to 10 years old in high-risk areas. Plant resistant pines. Bayleton is cleared for landscape use only. It is not effective on galled trees.
	myclobutanil EAGLE 20EW SYSTHANE WSP	---	8 fl.oz. 6-9 oz./A	Begin sprays in early spring. Repeat at 2- to 3-week intervals until disease threat has passed. Add adjuvant to improve coverage of needles. For preventive treatment only; Systhane will not cure galled trees.
Needlecast				
	chlorothalonil BRAVO ULTREX FLOWABLE 6F DACONIL ULTREX DACONIL WEATHER STIK 6F DACONIL ZN ECHO ULTIMATE FUNG-ONIL LANDSCAPE AND GARDEN FUNGICIDE	0.5-1 T. --- --- 2 t. --- 2.25 t. 2 T.	2.75-5.5 pt. 2.5-5 lb. 2.75-5.5 pt. 2 pt. 2.25-4.5 lb. --- ---	Apply at 3- to 4-week intervals in spring and fall.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.
	mancozeb DITHANE M-45 80W FORE 80W FORE FLOWABLE JUNCTION PROTECT T/O	5 t. 5 t. --- --- ---	4 lb. 4 lb. 1.2 qt. 1.5 lb. 4 lb.	Apply at 3- to 4-week intervals in spring and fall. For Christmas tree production, include spreader-sticker in tank mixes of mancozeb.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
PINE (cont.)				
Phytophthora Root Rot				
	dimethomorph STATURE DM	---	6.4-12.8 oz.	DRENCH: Apply when roots are well established or at first sign of disease. Repeat applications at 10- to 14-day intervals through production cycle. Apply sufficient water to wet the root zone.
	etr Diazole TRUBAN 5G TERRAZOLE 35W TERRAZOLE L	See Comments.		See Azalea: Phytophthora Root Rot.
	etr Diazole + thiophanate-methyl BANROT 8G BANROT 40W	See Comments.		See Azalea: Phytophthora Root Rot: Field and Container Stock.
	fosetyl-AI ALIETTE WDG	---	2.5-5 lb.	FOLIAR SPRAY: Spray to cover foliage. Do not exceed more than one spray every 30 days.
	mefenoxam SUBDUE MAXX	---	2.5 pt.	SEEDLING CONIFERS: Seed bed and plug plantings. Spray volume of 50 gallons covers 1 acre. Apply in spring and again in fall.
	SUBDUE MAXX	---	5 pt.	SEEDLING CONIFERS: 2-0 Transplants. Spray volume of 50 gallons covers 1 acre. Apply in spring and again in fall.
	SUBDUE GR SUBDUE MAXX	See Comments.		See Andromeda: Phytophthora Root Rot: Field And Container Stock.
	potassium salts of phosphorous acid ALUDE	0.3-0.67 fl.oz.	1-2 qt.	FOLIAR SPRAY: Apply to thoroughly wet foliage and repeat every 14 to 21 days as needed.
		---	6.67-12.67 fl.oz.	DRENCH: Apply 25 gallons of solution to 100 square feet of bed area and repeat monthly as needed.
		---	1-2 pt./cu.yd.	INCORPORATION: Just before potting, mix 1 to 2 quarts of solution per cubic yard of media. Follow with drench or foliar spray after one month, as needed.
	propamocarb BANOL 67S PROPLANT	See Comments.		See Azalea: Phytophthora Root Rot.
	<i>Trichoderma harzianum</i> Strain KRL-AG2 ROOT SHIELD	---	1-1.5 lb./cu.yd.	DRY SOIL MIX IN NURSERY AND GREENHOUSE: Thoroughly incorporate granules during mix preparation or pot filling. See label for compatibility with other fungicides and insecticides.
Pine Needle Rust				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	myclobutanil EAGLE 20EW SYSTHANE WSP	---	8 fl.oz. 6-9 oz./A	Begin sprays in early spring. Repeat at 2- to 3-week intervals until disease threat has passed. Add adjuvant to improve coverage of needles.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PINE (cont.)				
Pine Needle Rust (cont.)				
	triadimefon BAYLETON T/O STRIKE 25W	--- ---	1-2 oz. 1-2 oz.	Apply to trees as needed. Bayleton is cleared for landscape use only.
Pine Wood Nematode				
	None labeled	See Comments.		No effective controls. Found primarily on exotic pines. Slash longleaf and white are resistant. Immediately remove dead or dying trees.
Pitch Canker				
	None labeled	See Comments.		Avoid mechanical damage to trees. Prune out diseased limbs. Destroy trees with trunk cankers. Found in Christmas tree plantations on Virginia pines. Can be problem in loblolly and slash pine seed nurseries as well.
Rhizosphaera Needle Disease				
	chlorothalonil BRAVO ULTREX FLOWABLE 6F DACONIL ULTREX DACONIL WEATHER STIK 6F DACONIL ZN ECHO ULTIMATE LANDSCAPE AND GARDEN FUNGICIDE	--- --- --- --- 2 t. --- 2 T.	5.5 pt. 5 lb. 5.5 pt. 2 pt. 4.5 lb. ---	Make first application when new growth is 0.5 to 2 inches in length. Make second application 3 to 4 weeks later.
PITTOSPORUM				
Alternaria Leaf Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	iprodione CHIPCO 26GT CHIPCO 26019 50W IPRODIONE PRO SE SEXTANT 2F OHP 26GT-0	--- --- --- --- ---	1-2.5 qt. 1-2.5 qt./A 1-2.75 qt. 1-2.75 qt. 1-2.5 qt.	Apply at first sign of disease. Repeat at 7- to 14-day intervals. Nana varieties are most susceptible. NOT FOR RESIDENTIAL USE.
	polyoxin D VERANDA O	---	8 oz.	Apply to drip before disease develops and when conditions favor disease. Repeat applications every 7 to 10 days as needed.
	AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals. Alternate with a non-Group 19 fungicide for resistance management.
	pyraclostrobin INSIGNIA	---	4-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	thiophanate-methyl + iprodione 26/36 FUNGICIDE	---	See label.	Apply to point of run-off. Repeat at 7- to 14-day intervals as needed. See label for further directions.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PITTOSPORUM (cont.)				
Alternaria Leaf Spot (cont.)				
	trifloxystrobin COMPASS O	---	2-4 oz.	Apply to drip when conditions favor disease. Repeat applications at 7- to 14-day intervals as needed to control disease. See label for site specific instructions. Use higher rate at shorter interval when disease is severe.
	COMPASS 50W	---	2-4 oz.	
	triflumizole TERRAGUARD SC	0.25-0.5 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
Phytophthora Root Rot				
	etr Diazole TERRAZOLE 35W TERRAZOLE L TRUBAN 30W TRUBAN 5G		See Comments.	See Azalea: Phytophthora Root Rot.
Rhizoctonia Web Blight				
	flutolanil CONTRAST 70WSP PROSTAR 70WP	---	3-6 oz.	DRENCH: Apply enough water to wet the roots. Reapply as needed at 21- to 28-day intervals. See label for additional instructions.
		---	3-6 oz.	
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals. Alternate with a non-Group 19 fungicide for resistance management.
	thiophanate-methyl + iprodione 26/36 FUNGICIDE	---	33-84 fl.oz./A	Use sufficient water to thoroughly cover the leaves and stems. Reapply at 7- to 14-day intervals as needed. Use higher rate at shorter interval when disease is present. NOT FOR RESIDENTIAL USE.
	trifloxystrobin COMPASS O	---	2-4 oz.	Apply at first sign of disease. Repeat applications at 7- to 14-day intervals as needed to control disease.
	triflumizole TERRAGUARD SC	---	4-8 fl.oz.	Begin applications when conditions favor disease development. Repeat as needed every 7 to 14 days. Use higher rate at shorter intervals when disease is present.
Root Rot				
	etr Diazole + thiophanate-methyl BANROT 8G BANROT 40W	See Comments.		See Azalea: Phytophthora Root Rot.
	fosetyl-Al ALIETTE WDG	See Comments.		See Azalea: Phytophthora Root Rot.
	mefenoxam SUBDUE GR SUBDUE MAXX MEFENOXAM 2	See Comments.		See Andromeda: Phytophthora Root Rot.
	propamocarb BANOL 67S PROPLANT	See Comments.		See Azalea: Phytophthora Root Rot.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
PLUM (Flowering)				
Black Knot				
	lime-sulfur ORTHONIX LIME-SULFUR SPRAY	7.5 T.	---	DORMANT SPRAY: Apply before budbreak. Prune out knots
Blossom and Twig Blight (Brown Rot)				
	captan CAPTAN 50W ORTHOXIDE 50W	2 T. 2 T.	2 lb. 2 lb.	Apply at early bloom, full bloom, and petal fall. Prune blighted shoots.
	chlorothalonil CONCORDE DF DACONIL WEATHER STIK 6F DACONIL ZN LANDSCAPE AND GARDEN FUNGICIDE	--- --- 2 t. 2 T.	1.4 lb. 1.38 pt. 2 pt. ---	Apply at early bloom, full bloom, and petal fall. Prune blighted shoots.
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
	copper hydroxide CUPRO 2005 T/N	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate TRI-BASIC 53W COPPER SULFATE	---	4-5 lb.	Apply at budswell and pink bud. DO NOT apply later as injury may occur. Prune blighted shoots.
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz 10-20 fl.oz..	See Comments for copper sulfate, above.
	trifloxystrobin COMPASS O	---	2-4 oz.	Apply to drip prebloom, full bloom, and petal fall.
Plum Pockets				
	None labeled	See Comments.		Blossom and twig blight sprays may provide some control.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
POPLAR				
Leaf Spot				
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
Rust				
	myclobutanil EAGLE 20EW SYSTHANE WSP	---	6-12 fl.oz. 3-6 oz.	Apply at 10- to 14-day intervals. Add a nonphytotoxic spray adjuvant to improve coverage of the foliage and fungicidal performance. Eagle is cleared for landscape use.
	propiconazole BANNER MAXX PROPENSITY 1.3ME	---	16 fl.oz. 6-8 fl.oz.	Apply to drip at 14- to 28-day intervals. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	triadimefon BAYLETON T/O STRIKE 25W	---	1-2 oz.	Apply in sufficient water to cover foliage. Begin applications before disease appears and repeat as needed. Bayleton T/O is cleared for landscape use; Strike is labeled for nursery use only.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
	triforine ROSE AND SHRUB DISEASE CONTROL	1 T.	---	Apply at first sign of disease and repeat applications every 7 to 10 days until conditions no longer favor disease.
PRIVET (Ligustrum)				
Cercospora Leaf Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	chlorothalonil DACONIL ULTREX DACONIL WEATHER STIK 6F DACONIL ZN ECHO ULTIMATE FUNG-ONIL GARDEN FUNGICIDE LANDSCAPE AND GARDEN FUNGICIDE	---	1.4 lb. 1.38 pt. 2 t. 1.25 lb. ---	Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	chlorothalonil + fenarimol TWSOME 4.4F	2 t.	2 pt.	Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	chlorothalonil + thiophanate-methyl SPECTRO 90 CONSYST WDG TEE-1-UP	---	1-2 lb. 1 lb. 0.75-1 lb.	See Comments for chlorothalonil, above.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
PRIVET (Ligustrum) (cont.)				
Cercospora Leaf Spot (cont.)				
	mancozeb			Apply at first sign of disease. Repeat at 10- to 14-day intervals.
	DITHANE T/O	3 t.	1.5 lb.	
	4 FLOWABLE	---	1.2 qt.	
	MANCOZEB			
	FORE 80W	3 t.	1.5 lb.	
	FORE FLOWABLE	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
	PROTECT T/O 80W	3 t.	1.5 lb.	
	myclobutanil			Apply at first sign of disease; repeat at 7- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	EAGLE 20EW	---	6-12 fl.oz.	
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	
	thiophanate-methyl + iprodione			Apply to point of run-off. Repeat at 7- to 14-day intervals as needed. See label for further directions.
	26/36 FUNGICIDE	---	See label.	
	triadimefon			Apply in sufficient water to cover foliage. Begin applications before disease appears and repeat as needed. Bayleton T/O is cleared for landscape use; Strike is labeled for nursery use only.
	BAYLETON T/O	---	1-2 oz.	
	STRIKE 25W	---	---	
	SYSTEMIC FUNGICIDE FOR TURF AND ORNAMENTS	1-2 T.	---	
	trifloxystrobin			Apply at first sign of disease. Repeat applications at 7- to 14-day intervals as needed to control disease.
	COMPASS O	---	2-4 oz.	
Root Rot				
	etridiazole			See Azalea: Phytophthora Root Rot.
	TERRAZOLE 35W		See Comments.	
	TERRAZOLE L			
	TRUBAN 30W			
	TRUBAN 5G			
	etridiazole + thiophanate-methyl			See Azalea: Phytophthora Root Rot: Field and Container Stock.
	BANROT 8G	See Comments.		
	BANROT 40W			
PYRACANTHA (Firethorn)				
Fireblight				
	copper hydroxide			Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	CUPRO 2005 T/N/O	---	0.75-2 lb./A	
	BLACK SPOT AND POWDERY MILDEW CONTROL	1.5 t.	---	
	copper sulfate pentahydrate			Apply every 5 to 7 days during bloom until petal fall. Avoid excess nitrogen fertilizer in spring.
	PHYTON 27	---	20-40 fl.oz.	
	streptomycin sulfate			Apply every 3 to 4 days during bloom and every 5 to 7 days after bloom when weather favors disease spread.
	AGRIMYCIN 17 21W	---	0.5 lb. (100 ppm)	
	FIRE BLIGHT SPRAY	0.75 t.	0.5 lb.	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments	
		Per Gallon	Per 100 Gallons		
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca					
PYRACANTHA (Firethorn) (cont.)					
Scab					
	chlorothalonil			Apply at first budbreak, 7 to 14 days later, and at petal fall.	
	CONCORDE DF	---	1.4 lb.		
	DACONIL ULTREX	---	1.4 lb.		
	DACONIL WEATHER STIK 6F	---	1.38 pt.		
	DACONIL ZN	2 t.	2 pt.		
	ECHO ULTIMATE	---	1.25 lb.		
	GARDEN FUNGICIDE	2.25 t.	---		
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---		
	copper hydroxide				Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	CUPRO 2005 T/N/O	---	0.75-2 lb./A		
	BLACK SPOT AND POWDERY MILDEW CONTROL	1.5 t.	---		
	chlorothalonil + thiophanate-methyl			Make first application when conditions favor disease and repeat at 7- to 10-day intervals.	
	TEE-1-UP				
	CONSYST WDG	---	1 lb.		
	mancozeb			Apply at first budbreak, 7 to 14 days later, and at petal fall.	
	DITHANE T/O	3 t.	1.5 lb.		
	FORE 80W	3 t.	1.5 lb.		
	FORE FLOWABLE	---	1.2 qt.		
	JUNCTION	---	1.5 lb.		
	MANCOZEB DG	1.5-3 t.	1-2 lb.		
	PROTECT T/O	3 t.	1.5 lb.		
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.	
	EAGLE 20EW	---	6-12 fl.oz.		
	IMMUNOX	2 t.	---		
	SYSTHANE WSP	---	3-6 oz.		
	propiconazole			Apply at first budbreak, as needed to drip. Apply 7 to 14 days later and at petal fall.. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.	
	BANNER MAXX	---	5-8 fl.oz.		
	PROPENSITY 1.3ME	---	6-8 fl.oz.		
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.	
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---		
	thiophanate-methyl			Apply at first budbreak, 7 to 14 days later, and at petal fall.	
	3336 4.5F	0.5-1.25 t.	10-20 fl.oz.		
	3336 50W	2.33-4 t.	12-16 oz.		
	HALT 50W	1.5 t.	---		
	OHP 6672	---	12-16 oz.		
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.		
	thiophanate-methyl + iprodione			Apply to point of run-off. Repeat at 7- to 14-day intervals as needed. See label for further directions.	
	26/36 FUNGICIDE	---	See label.		

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
QUINCE (Flowering)				
Cedar Rust Diseases				
	mancozeb			Apply when blossoms show color. Repeat at 7- to 10-day intervals to mid June.
	DITHANE T/O	2 t.	1.5 lb.	
	FORE 80W	2 t.	1.5 lb.	
	PROTECT T/O 80W	2 t.	1.5 lb.	
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	EAGLE 20EW	---	6-12 fl.oz.	
	SYSTHANE WSP	---	3-6 oz.	
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	
	triflumizole			Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
	TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	
Scab				
	chlorothalonil			Apply at 7- to 14-day intervals, as needed.
	CONCORDE DF	---	1.4 lb.	
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + thiophanate-methyl			Make first application when conditions favor disease and repeat at 7- to 10-day intervals.
	TEE-1-UP			
	CONSYST WDG	---	0.75-1 lb.	
	mancozeb			Apply at green tip. Repeat at 7- to 14-day intervals.
	DITHANE M-45 80W	2 t.	1.5 lb.	
	FORE 80W	2 t.	1.5 lb.	
	PROTECT T/O 80W	2 t.	1.5 lb.	
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	EAGLE 20EW	---	6-12 fl.oz.	
	SYSTHANE WSP	---	3-6 oz.	
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	
	triflumizole			Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
	TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
RHODODENDRON				
See Azalea.				
ROSE				
Blackspot				
	chlorothalonil			Apply at budbreak. Repeat at 7- to 14-day intervals until frost. For best results, stay on 7-day spray intervals. Shorten spray intervals during wet weather. Chlorothalonil may scorch foliage of certain rose cultivars during hot weather in the summer.
	CONCORDE DF	---	1 lb.	
	DACONIL ULTREX	---	1 lb.	
	DACONIL WEATHER STIK 6F	---	1 pt.	
	DACONIL ZN	2 t.	2 pt.	
	ECHO ULTIMATE	---	1.25 lb.	
	FUNG-ONIL	2.25 t.	---	
	GARDEN FUNGICIDE	2.25 t.	---	
	LIQUID FUNGICIDE	6 T.	---	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + fenarimol			
	TWOSOME 4.4F	2 t.	2 pt.	
	chlorothalonil + thiophanate-methyl			
	TEE-1-UP			
	CONSYST WDG	---	0.75-1 lb.	
	copper ammonium complex			
	LIQUID COPPER FUNGICIDE	2 t.	---	
	kresoxim-methyl			
	CYGNUS	---	1.6-3.2 oz.	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
ROSE (cont.)				
Blackspot (cont.)				
	mancozeb			Apply at budbreak. Repeat at 7- to 14-day intervals until frost. For best results, stay on 7-day spray intervals. Shorten spray intervals during wet weather. Add a spreader-sticker to wettable powder (W) formulations to improve coverage of foliage.
	DITHANE M-45 80W	3 t.	1.5 lb.	
	FORE 80W	3 t.	1.5 lb.	
	FORE FLOWABLE	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
	PROTECT T/O 80W	3 t.	1.5 lb.	
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	EAGLE 20EW	---	6-12 fl.oz.	
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	propiconazole			See Comments for mancozeb, above. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	BANNER MAXX	---	5-8 fl.oz.	
	PROPENSITY 1.3ME	---	6-8 fl.oz.	
	SYSTEMIC FUNGICIDE	2 T.	---	
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	
	thiophanate-methyl			Apply at budbreak. Repeat at 7- to 14-day intervals until frost. For best results, stay on 7-day spray intervals. Shorten spray intervals during wet weather. Add a spreader-sticker to wettable powder (W) formulations to improve coverage of foliage.
	3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil			See Comments for thiophanate-methyl, above.
	SYS STAR WDG	---	4-8 oz.	
	trifloxystrobin			Apply to point of drip when disease is detected or when conditions favor disease. Repeat every 7 to 14 days until threat of outbreak is over.
	COMPASS O	---	2-4 oz.	
	triforine			Apply at budbreak. Repeat at 7- to 14-day intervals until frost. For best results, stay on 7-day spray intervals. Shorten spray intervals during wet weather. Add a spreader-sticker to wettable powder (W) formulations to improve coverage of foliage.
	ROSE AND SHRUB DISEASE CONTROL	1 T.	---	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
ROSE (cont.)				
Botrytis Blight				
	chlorothalonil DACONIL ULTREX	---	1 lb.	Regular blackspot sprays should control botrytis blight. Shorten spray intervals to 7 days for best protection. Remove blighted blooms and shoots. Problems occur during wet, overcast weather.
	DACONIL WEATHER STIK 6F	---	1 pt.	
	DACONIL ZN	2 t.	2 pt.	
	ECHO ULTIMATE	---	1.25 lb.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + fenarimol TWSOME 4.4F	2 t.	2 pt.	
	copper sulfate pentahydrate PHYTON 27	---	15-50 fl.oz.	Use sufficient volume of water to thoroughly cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease. Use higher rate at shorter interval to control severe disease outbreak.
	cyprodinil + fludioxonil PALLADIUM	---	4-6 oz.	Apply to drip when conditions favor disease and repeat at 7- to 14-day intervals as needed.
	fludioxonil MEDALLION	---	2-4 oz.	Apply to run-off at 7- to 14-day intervals when conditions favor disease. See label for further instructions.
	iprodione CHIPCO 26GT	---	1-2.5 qt	See Comments for chlorothalonil + fenarimol, above. NOT FOR RESIDENTIAL USE.
	CHIPCO 26019 50W	---	1-2.5 qt./A	
	IPRODIONE PRO SE	---	1-2.75 qt.	
	OHP 26GT-O	---	1-2.5 qt	
	pyraclostrobin INSIGNIA	---	2-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Regular blackspot sprays should control botrytis blight. Shorten spray intervals to 7 days for best protection. Remove blighted blooms and shoots. Problems occur during wet, overcast weather.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	OHP 6672 50W	---	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate-methyl + iprodione 26/36 FUNGICIDE	---	33-84 fl.oz./A	Use sufficient water to thoroughly cover the leaves and stems. Reapply at 7- to 14-day intervals as needed. Use higher rate at shorter interval when disease is present. NOT FOR RESIDENTIAL USE.
	trifloxystrobin COMPASS O	---	1-2 oz.	Apply as a full cover spray at 7- to 14-day intervals when conditions favor disease. See label for further instructions.
	triflumizole TERRAGUARD SC	---	4-8 fl.oz.	Begin applications when conditions favor disease development. Repeat as needed every 7 to 14 days. Use higher rate at shorter intervals when disease is present.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
ROSE (cont.)				
Canker				
	None labeled		See Comments.	Maintain good plant vigor. Prune out diseased canes. Use dormant spray of lime-sulfur.
Cercospora Leaf Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	FOLIAR SPRAY: Apply at first sign of disease and then every 7 to 28 days as needed.
	chlorothalonil CONCORDE DF	---	1 lb.	Appears in early spring in landscape plantings. Apply at first sign of symptoms and repeat every 7 to 14 days as needed.
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	ECHO 720 LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	cyprodinil + fludioxonil PALLADIUM	---	2-4 oz.	Apply to drip when conditions favor disease and repeat at 7- to 14-day intervals as needed.
	pyraclostrobin INSIGNIA	---	2-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Appears in early spring in landscape plantings. Apply at first sign of symptoms and repeat every 7 to 14 days as needed.
	3336 50W	2.33-4 t.	12-16 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
Crown Gall				
	Agrobacterium radio-bactor Strain 84 GALLEX			See Euonymus: Crown Gall.
	GALLTROL 1.2% NORBAC 84C		See Comments.	
Downy Mildew				
	azoxystrobin HERITAGE 50W	---	2-4 oz.	Apply when conditions favor disease and repeat at 7- to 21-day intervals. Use higher rate at shorter intervals after symptoms are first seen. Occurs in late winter and early spring when weather is wet.
	chlorothalonil + thiophanate- methyl TEE-1-UP CONSYST WDG	---	0.75-1 lb.	Make first application when conditions favor disease and repeat at 7- to 10-day intervals.
	copper sulfate pentahydrate PHYTON 27	---	15-50 fl.oz.	Use sufficient volume of water to thoroughly cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease. Use higher rate at shorter interval to control severe disease outbreak.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
ROSE (cont.)				
Downy Mildew (cont.)				
	dimethomorph STATURE DM	---	6.4-12.8 oz.	FOLIAR SPRAY: Apply in sufficient water to thoroughly wet the leaves and stems. Repeat applications at 10 to 14-day intervals through the production cycle.
	fenamidone FENSTOP	---	7-14 fl.oz.	Apply to drip when conditions favor sidease and repeat after 28 days. Do not exceed 400 gallons per acre Repeat as need on a 28-day spray schedule. Do not make more than two applications of the maximum rate per crop per season. Greenhouse use only.
	fosetyl-AI ALIETTE WDG	---	2.5 lb.	Occasional problem on roses grown in polyhouses in early spring. Also seen in landscape plantings. Ventilate houses to keep RH below 85 percent. Spray to wet. Repeat as needed but do not exceed one spray every 7 days.
	kresoxim-methyl CYGNUS	---	1.6-3.2 oz.	Apply as protective spray at 10- to 14-day intervals. Apply higher rate at shorter interval when conditions favor disease.
	polyoxin D VERANDA O	---	4-8 oz.	Apply to drip before disease develops and when conditions favor disease. Repeat applications every 7 to 10 days as needed.
	AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals.
	pyraclostrobin INSIGNIA	---	4-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	trifloxystrobin COMPASS O	---	1-2 oz.	Apply to point of drip when disease is detected or when conditions favor disease. Repeat every 7 to 14 days until threat of outbreak is over.
Phytophthora Root Rot				
	mefenoxam ALUDE SUBDUE GR SUBDUE MAXX	See Comments.		See Andromeda: Phytophthora Root Rot: Field and Container Stock.
	potassium salts of phosphorous acid ALUDE	0.3-0.67 fl.oz.	1-2 qt.	FOLIAR SPRAY: Apply to thoroughly wet foliage and repeat every 14 to 21 days as needed.
		---	6.67-12.67 fl.oz.	DRENCH: Apply 25 gallons of solution to 100 square feet of bed area and repeat monthly as needed.
Powdery Mildew				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
ROSE (cont.)				
Powdery Mildew (cont.)				
	chlorothalonil + fenarimol TWSOME 4.4F	2 t.	2 pt.	Regular blackspot sprays should control powdery mildew. Otherwise, apply at first sign of disease and repeat at 5- to 14-day intervals. Copper oleate, fenarimol, and triadimefon will not control blackspot.
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper oleate POWDERY MILDEW CONTROL 15S	1 T.	---	Regular blackspot sprays should control powdery mildew. Otherwise, apply at first sign of disease and repeat at 5- to 14-day intervals.
	copper sulfate pentahydrate PHYTON 27	---	15-50 fl.oz.	Use sufficient volume of water to thoroughly cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease. Use higher rate at shorter interval to control severe disease outbreak.
	cyprodinil + fludioxonil PALLADIUM	---	4-6 oz.	Apply to drip when conditions favor disease and repeat at 7- to 14-day intervals as needed.
	fenarimol RUBIGAN AS	---	4-12 fl.oz.	Thoroughly agitate. May cause puckering of leaves and slow the growth on some cultivars during cool, foggy weather.
	kresoxim-methyl CYGNUS	---	1.6-3.2 oz.	Apply as protective spray at 10- to 14-day intervals. Apply higher rate at shorter interval when conditions favor disease.
	myclobutanil EAGLE 20EW	---	6-12 fl.oz.	Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	paraffinic oil SUNSPRAY ULTRA FINE OIL	2.5-5 T.	1% v/v	Apply at first sign of disease and reapply every 1 to 2 weeks. Do not apply when temperatures exceed 85°F.
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	potassium bicarbonate MILSTOP	---	1.25-3 lb.	GREENHOUSE: Use a sufficient volume of water to cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease.
		---	2-3 lb.	FIELD APPLICATION: Use a sufficient volume of water to cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
ROSE (cont.)				
Powdery Mildew (cont.)				
	propiconazole BANNER MAXX	---	5-8 fl.oz	Apply on a 10- to 14-day schedule when conditions favor disease. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	PROPENSITY 1.3ME	---	6-8 fl.oz.	
	SYSTEMIC FUNGICIDE	1-3 T.	---	
	pyraclostrobin INSIGNIA	---	4-8 oz.	
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Apply on a 10- to 14-day schedule when conditions favor disease.
	3336 50W	2.33-4 t.	12-24 oz.	
	HALT 50W	2.5 t.	---	
	OHP 6672 50W	---	12-24 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate methyl + flutolanil SYS STAR WDG	---	4-8 oz.	See Comments for thiophanate-methyl, above.
	thiophanate-methyl + iprodione 26/36 FUNGICIDE	---	33-84 fl.oz./A	Use sufficient water to thoroughly cover the leaves and stems. Reapply at 7- to 14-day intervals as needed. Use higher rate at shorter interval when disease is present. NOT FOR RESIDENTIAL USE.
	triadimefon BAYLETON T/O	---	1-2 oz.	Bayleton is cleared for landscape use only. Apply Systemic Fungicide as a full cover spray when symptoms first appear and repeat every 7 to 14 days.
	STRIKE 25W	---	1-2 oz.	
	SYSTEMIC FUNGICIDE FOR TURF AND ORNAMENTS	1-2 T.	---	
	trifloxystrobin COMPASS O	---	1-2 oz.	Apply to point of drip when disease is detected or when conditions favor disease. Repeat every 7 to 14 days until threat of outbreak is over.
	triflumizole TERRAGUARD SC	---	4-16 fl.oz.	Begin applications when conditions favor disease development. Repeat as needed every 7 to 14 days. Use higher rate at shorter intervals when disease is present.
	triforine ROSE AND SHRUB DISEASE CONTROL	1 T.	1.5 pt.	Apply at 7- to 14-day intervals. Use 4 to 8 ounces in maintenance spray program.
	TRIFORINE 18.2E	---	12-18 fl.oz.	
Storage Rot (Botrytis)				
	iprodione CHIPCO 26019 50W	---	1-2.5 qt./A	Dip bare root roses for 5 minutes before cold storage. NOT FOR RESIDENTIAL USE.
	IPRODIONE PRO SE	---	1-2.75 qt.	
	SEXTANT 2F	---	1 qt.	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
ROSE (cont.)				
Storage Rot (cont.)				
	PCNB			DIP TREATMENT: Dip or spray dormant roses prior to storage.
	DEFEND 75W	---	2 lb.	
	DEFEND 2L	---	1 gal.	
	TERRACLOR 75W	---	2 lb.	
RUSSIAN OLIVE				
Cercospora Leaf Spot				
	mancozeb JUNCTION	---	1.5 lb.	Apply at first sign of disease and repeat every 7 to 10 days.
	myclobutanil EAGLE 20EW SYSTHANE WSP	---	6-12 fl.oz. 3-6 oz.	Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
SMOKE-TREE				
Cercospora Leaf Spot				
	myclobutanil EAGLE 20EW IMMUNOX SYSTHANE WSP	---	6-12 fl.oz. ---	Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. 10-20 fl.oz.	Apply at first sign of disease. Repeat at 10- to 14-day intervals as needed.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
SPIREA				
Fireblight				
	copper hydroxide CUPRO 2005 T/N/O	1.5 t.	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
Leaf Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	chlorothalonil CONCORDE DF	---	1.4 lb.	Apply every 7 to 14 days as needed.
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN LANDSCAPE AND GARDEN FUNGICIDE	2 t. 2 T.	2 pt. ---	
	chlorothalonil + thiophanate-methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. 10-20 fl.oz.	Apply at first sign of disease. Repeat at 5- to 14-day intervals.
Powdery Mildew				
	copper sulfate pentahydrate PHYTON 27	---	20-25 fl.oz.	Use sufficient volume of water to thoroughly cover the leaves and stems. Repeat applications at 7- to 14-day intervals as needed to control disease..
	paraffinic oil SUNSPRAY ULTRA-FINE OIL	2.5-5 T.	1% v/v (0.8 gal.)	Apply at first sign of disease and reapply every week. Do not apply when temperatures exceed 85°F.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
SPIREA (cont.)				
Powdery Mildew (cont.)				
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals in sufficient water to cover foliage.
	pyraclostrobin INSIGNIA	---	4-8 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.
	thiophanate-methyl 3336 4.5F 3336 50W HALT 50W SYSTEC 1998 4.5F		10-20 fl.oz. 12-24 oz. 1.5 t. 10-20 fl.oz.	
	trifloxystrobin COMPASS O COMPASS 50W	---	1-2 oz. 1-2 oz.	Apply to drip when conditions favor disease. Repeat applications at 7- to 14-day intervals as needed to control disease. See label for site specific instructions. Use higher rate at shorter interval when disease is severe.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in nursery.
SYCAMORE AND LONDON PLANE TREE				
Anthraco				
	bordeaux mixture	8 T.	8 lb.	Destroy fallen leaves. Valuable specimens can be protected with fungicides. Apply as leaves unfurl and repeat at 7- to 14-day intervals.
	chlorothalonil CONCORDE DF DACONIL ULTREX DACONIL WEATHER STIK 6F DACONIL ZN ECHO ULTIMATE FUNG-ONIL GARDEN FUNGICIDE LANDSCAPE AND GARDEN FUNGICIDE	---	1.4 lb. 1.4 lb. 1.38 pt. 2 pt. 1.25 lb. --- --- ---	Destroy fallen leaves. Valuable specimens can be protected with fungicides. Apply as leaves unfurl and repeat at 7- to 14-day intervals.
	chlorothalonil + fenarimol TWOsome 4.4F	2 t.	2 pt.	See Comments for chlorothalonil, above.
	chlorothalonil + thiophanate- methyl SPECTRO 90 CONSYST WDG	---	1-2 lb. 1 lb.	See Comments for chlorothalonil, above.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
SYCAMORE AND LONDON PLANE TREE (cont.)				
Anthracnose (cont.)				
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	copper sulfate pentahydrate PHYTON 27	---	35 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days as needed.
	mancozeb DITHANE M-45 80W	3 t.	1.5 lb.	Apply at budbreak. Repeat at 7- to 14-day intervals until frost. For best results, stay on 7-day spray intervals. Shorten spray intervals during wet weather. Add a spreader-sticker to wettable powder (W) formulations to improve coverage of the foliage.
	FORE 80W	3 t.	1.5 lb.	
	FORE FLOWABLE	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
	PROTECT T/O 80W	3 t.	1.5 lb.	
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	thiophanate-methyl 3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	Destroy fallen leaves. Valuable specimens can be protected with fungicides. Apply as leaves unfurl and repeat at 7- to 14-day intervals.
	3336 50W	2.33-4 t.	12-16 oz.	
	HALT 50W	2.5 t.	---	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
Bacterial Leaf Scorch				
	None labeled	See Comments.		Caused by fastidious bacteria and spread by leaf-hoppers. Remove damaged trees. Common in the southern two-thirds of Alabama.
VIBURNUM				
Downy Mildew				
	azoxystrobin HERITAGE 50W	---	1-2 oz.	Spray to drip. Repeat as needed at 7- to 28-day intervals.
	dimethomorph STATURE DM	---	6.4-12.8 oz.	FOLIAR SPRAY: Apply in sufficient water to thoroughly wet the leaves and stems. Repeat applications at 10 to 14-day intervals through the production cycle.
	mancozeb DITHANE T/O	3 t.	1.5 lb.	Repeat every 7 to 10 days.
	FORE FLOWABLE	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	PROTECT T/O 80W	3 t.	1.5 lb.	
	polyoxin D AFFIRM WDG	---	0.25-0.5 lb.	Apply before disease development when conditions favor disease as a full cover spray and repeat as needed at 7- to 10-day intervals.
Powdery Mildew				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 7- to 28-day intervals. Use higher rate at shorter intervals on severely diseased plants.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
VIBURNUM (cont.)				
Powdery Mildew (cont.)				
	chlorothalonil			Apply at first sign of disease (midsummer) and repeat at 7- to 10-day intervals.
	CONCORDE DF	---	1.4 lb.	
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	ECHO ULTIMATE	---	1.25 lb.	
	FUNG-ONIL	2.25 t.	---	
	GARDEN FUNGICIDE	2.25 t.	---	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + fenarimol			Apply at first sign of disease (midsummer) and repeat at 7- to 10-day intervals.
	TWOSOME 4.4F	2 t.	2 pt.	
	chlorothalonil + thiophanate-methyl			See Comments for chlorothalonil, above.
	SPECTRO 90	---	1-2 lb.	
	myclobutanil			Apply at first sign of disease; repeat at 10- to 14-day intervals. Add a non-ionic surfactant to the tank mixture. Systhane is cleared for nursery use.
	EAGLE 20EW	---	6-12 fl.oz.	
	IMMUNOX	2 T.	---	
	SYSTHANE WSP	---	3-6 oz.	
	paraffinic oil			Apply at first sign of disease and reapply every 1 to 2 weeks. Do not apply when temperatures exceed 85of.
	SUNSPRAY ULTRA FINE OIL	2.5-5 T.	1% v/v	
	tebuconazole			Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
	DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	
	thiophanate-methyl			Apply at first sign of disease (midsummer) and repeat at 7- to 10-day intervals.
	3336 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	3336 50W	2.33-4 t.	12-24 oz.	
	HALT 50W	1.5 t.	---	
	OHP 6672 50W	---	12-24 oz.	
	SYSTEC 1998 4.5F	0.5-1.25 t.	10-20 fl.oz.	
	thiophanate-methyl + iprodione			Apply to point of run-off. Repeat at 7- to 14-day intervals as needed. See label for further directions.
	26/36 FUNGICIDE	---	See label.	
	triadimefon			Bayleton is cleared for landscape use only. Apply Systemic Fungicide as a full cover spray when symptoms first appear and repeat every 7 to 14 days.
	BAYLETON T/O	---	1-2 oz.	
	STRIKE 25W	---	1-2 oz.	
	SYSTEMIC FUNGICIDE FOR TURF AND ORNAMENTALS	1-2 T.	---	

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne–Yucca				
VIBURNUM (cont.)				
Southern Blight				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	SOIL DRENCH: Apply from late spring through early fall on 7- to 21-day intervals as needed. Use higher rate at shorter intervals when disease is present.
	flutolanil CONTRAST 70WSP	---	3-6 oz.	SOIL DRENCH: Apply 1 to 2 pints of suspension per square foot of bed or bench area. Retreat every 21 to 28 days until crop is finished. See label for drench rates on larger containers and for additional information. May be applied through overhead, microjet, and drip irrigation systems.
	PROSTAR 70W	---	3-6 oz.	
	PCNB DEFEND 2L DEFEND 10G DEFEND 75W TERRACLOR 75W	See Comments.		See Aucuba: Southern Stem Rot. Occurs on <i>V. x pragense</i> in early to midsummer.
WALNUT				
Anthracnose				
	chlorothalonil CONCORDE DF	---	1.4 lb.	Apply at 7- to 14-day intervals.
	DACONIL ULTREX	---	1.4 lb.	
	DACONIL WEATHER STIK 6F	---	1.38 pt.	
	DACONIL ZN	2 t.	2 pt.	
	LANDSCAPE AND GARDEN FUNGICIDE	2 T.	---	
	chlorothalonil + thiophanate- methyl SPECTRO 90	---	1-2 lb.	See Comments for chlorothalonil, above.
	mancozeb DITHANE T/O	3 t.	1.5 lb.	FOLIAR SPRAY: Begin sprays when plants are fully leafed out. Repeat every 7 to 10 days as needed. Add a non-ionic surfactant to the tank mix.
	FORE FLO 37F	---	1.2 qt.	
	JUNCTION	---	1.5 lb.	
	MANCOZEB DG	1.5-3 t.	1-2 lb.	
	PROTECT T/O 80W	3 t.	1.5 lb.	
	propiconazole BANNER MAXX	---	5-8 fl.oz.	Apply at 14- to 21-day intervals. Use sufficient volume of water mixed with Propensity to thoroughly cover the leaves and stems. Repeat applications at 21-day intervals.
	PROPENSITY 1.3ME	---	6-8 fl.oz.	
	pyraclostrobin INSIGNIA	---	8-16 oz.	Apply to point of drip before disease appears when conditions favor disease. Repeat applications as needed at 7- to 14-day intervals. DO NOT use organosilicone adjuvant as phytotoxicity may occur on certain ornamentals.

Host and Disease	Fungicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
Commercial Ornamentals: Disease Control—Woody Trees, Shrubs, and Perennial Ground Covers, Indian Hawthorne—Yucca				
WILLOW				
Anthracnose				
	copper ammonium complex LIQUID COPPER FUNGICIDE	2 t.	---	Apply at first sign of disease and repeat applications every 7 to 14 days as needed. Shorten application interval when disease is severe.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on possible phytotoxicity.
	tebuconazole DISEASE CONTROL FOR ROSES, FLOWERS, AND SHRUBS	1.5 T.	---	Make three applications at 7- to 14-day intervals as needed to control disease. Make first application at first sign of disease.
Crown Gall				
	Agrobacterium radio-bactor Strain 84 GALLEX GALLTROL 1.2% NORBAC 84C	See Comments.		See Euonymus: Crown Gall.
Leaf Spot				
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. 10-20 fl.oz.	Apply at first sign of disease and repeat every 7 to 14 days.
Rust				
	triadimefon BAYLETON T/O STRIKE 25W	---	1-2 oz.	Apply in sufficient water to cover foliage to point of drip. Begin applications before disease appears and repeat as needed. Bayleton is cleared for landscape use only; Strike is labeled for nursery use.
	triflumizole TERRAGUARD SC	0.25-1 t.	4-8 fl.oz.	Apply to drip before disease develops at 7- to 14-day intervals as needed. Use higher rate at shorter interval under heavy disease pressure. For use in greenhouse, nursery, and interiorscapes.
YUCCA				
Cercospora and Septoria Leaf Spot				
	azoxystrobin HERITAGE 50W	---	1-4 oz.	Apply at first sign of disease and repeat at 14- to 28-day intervals.
	chlorothalonil CONCORDE DF LANDSCAPE AND GARDEN FUNGICIDE	---	1-2.5 lb. 2 T. ---	Apply at first sign of disease. Repeat at 7- to 14-day intervals.
	copper hydroxide CUPRO 2005 T/N/O	---	0.75-2 lb./A	Apply at first sign of disease and reapply at 7- to 14-day intervals. See label for information on phytotoxicity.
	thiophanate-methyl 3336 4.5F 3336 50W SYSTEC 1998 4.5F	0.5-1.25 t. 2.33-4 t. 0.5-1.25 t.	10-20 fl.oz. 12-16 oz. 10-20 fl.oz.	Apply at first sign of disease. Repeat at 7- to 14-day intervals.

NEMATODE CONTROL

Commercial Ornamentals: Nematode Control				
Host and Disease	Nematicide and Formulation	Rates (Unless Stated Otherwise)		Comments
		Per Gallon	Per 100 Gallons	
REGISTERED CROPS: Herbaceous annuals and perennials, trees, shrubs				
	1-3 dichloropropene TELONE			PREPLANT BROADCAST: Apply with mold board or chisel equipment with injectors 12 inches apart to a depth of 10 to 12 inches. Compact soil with press wheel or drag immediately after application. Leave area undisturbed for 7 to 14 days before planting. Application rate varies by soil type. Consult label for further instructions. Commercial nursery use ONLY . Telone is a RESTRICTED USE pesticide.
	steam	See Comments.		See Annuals And Bedding Plants: Soil Pasteurization /Fumigation.
REGISTERED CROPS: All annual and perennial flowers and herbs, woody trees, shrubs				
	chitin and other organic nitrogen sources CLANDOSAN 618	---	50-140 lb.	PREPLANT INCORPORATED: Treats 1000 square feet of bed area. Till to 6- to 8-inch depth.
		---	50-140 lb.	BROADCAST POSTPLANT: Treats 1000 square feet of bed area. Irrigate with 0.5 inch water to avoid burn. Contains 10.4 percent nitrogen.
	ABG-9008 <i>Myrothecium serrucaria</i> Di Tera ES	---	5-40 gal./A	PREPLANT BAND: Apply as a 12-inch band over the row middle. Repeat as needed. SOIL DRENCH: Repeat as needed on container plants. See label for additional application directions and rates.

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For more information, contact your county Extension office. Visit <http://www.aces.edu/counties> or look in your telephone directory under your county's name to find contact information.

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency or the Alabama Department of Agriculture and Industries. If a registration is changed or canceled, the rate listed here is no longer recommended. Before you apply **any** pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

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