

## CONIFER DISEASES (Commercial)

Sherrie Smith

Disease	Product	Active Ingredient	FRAC Code	Rate	Re-entry Interval	Comments
Phytophthora Pythium	Heritage (not labeled for pythium except turf)	azoxystrobin	11	1 - 4 oz/100 gal	4 hours	See label for specific rates. Do not allow drift to apples or crabapples.
	Mural	azoxystrobin + benzovindiflupyr	11 + 7	3 - 7 oz/100 gal	12 hours	Rate depends on whether used as soil drench or foliar spray. See label.
	Adorn	fluopicolide	43	1 - 4 fl oz/100 gal	12 hours	Adorn must be tank-mixed with another labeled fungicide for resistance management.
	Subdue MAXX	mefenoxam	4	1 - 2 fl oz/100 gal	48 hours	Drench rate.
	Segovis (not labeled for pythium)	oxanthiapiprolin	U15	0.6 - 2.4 fl oz/ 100 gal	4 hours	Make no more than 2 consecutive applications before switching to another non-U15 group fungicide.
Phomopsis blight ( <i>Phomopsis juniperovora</i> )	Heritage	azoxystrobin	11	1 - 4 oz/100 gal	4 hours	Apply every 7 - 28 days.
	Mural	azoxystrobin + benzovindiflupyr	11 + 7	4 - 7 oz/100 gal	12 hours	Apply every 7 - 21 days.
	Kocide 2000	copper hydroxide	M1	1.5 - 3 lb/A	24 - 48 hours (see label)	Begin applications in the spring at the initiation of new growth.
	Kocide 3000	copper hydroxide	M1	0.75 - 1.75 lb/A	24 - 48 hours (see label)	Begin applications in the spring at the initiation of new growth.
	Protect DF	mancozeb	M3	1 - 2 lb/100 gal	24 hours	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
	Mancozeb 4 FL	mancozeb	M3	1.2 qt/100 gal	24 hours	
	Junction	mancozeb + copper hydroxide	M3 + 1	1.5 lb/100 gal (1/2 tbs/gal)	24 hours	Do not apply Junction in a spray solution having less than 6.5 pH as phytotoxicity may occur.

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Phomopsis blight ( <i>cont.</i> ) ( <i>Phomopsis juniperovora</i> )	ProPensity 1.3 ME	propiconazole	3	2 - 24 fl oz/100 gal	24 hours	Apply every 14 - 21 days.
	3336 EG	thiophanate-methyl	1	12 - 24 oz/100 gal	12 hours	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
	3336 WP	thiophanate-methyl	1	12 - 24 oz/100 gal	12 hours	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
	3336 F	thiophanate-methyl	1	12 - 24 fl oz/100 gal	12 hours	Begin treatment in the fall at first sign of disease.
Kabatina blight ( <i>Kabatina juniperi</i> )	Protect DF	mancozeb	M3	1 - 2 lb/100 gal	24 hours	Begin treatment in the fall at first sign of disease.
	3336 F	thiophanate-methyl	1	12 - 24 fl oz/100 gal	12 hours	Begin treatment in the fall at first sign of disease.
	3336 WP	thiophanate-methyl	1	12 - 24 oz/100 gal	12 hours	Begin treatment in the fall at first sign of disease.
	3336 EG	thiophanate-methyl	1	12 - 24 oz/100 gal	12 hours	Begin treatment in the fall at first sign of disease.
Cercospora needle blight	Kocide 2000	copper hydroxide	M1	1.5 - 3 lb/A	24 - 48 hours (see label)	Begin applications in the spring at the initiation of new growth and repeat at 7 - 30 day intervals if needed.
	Kocide 3000	copper hydroxide	M1	0.75 - 1.75 lb/A	24 - 48 hours (see label)	Begin applications in the spring at the initiation of new growth and repeat at 7 - 30 day intervals if needed.
	Mancozeb 4 FL	mancozeb	M3	1.2 qt/100 gal	24 hours	
	Junction	mancozeb + copper hydroxide	M3 + M1	1.5 lb/100 gal (1/2 tbs/gal)	24 hours	Do not apply Junction in a spray solution having less than 6.5 pH as phytotoxicity may occur.
	Eagle 20 EW	myclobutanil	3	8 fl oz/100 gal	24 hours	See label for rates per disease.

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Botrytis seedling blight	Daconil Ultrix	chlorothalonil	M5	1.25 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
	Pegasus HPX	chlorothalonil	M5	1.5 - 5.5 pt/acre	12 hours (for next 6.5 days see label for special precautions)	See label for application rates per disease and repeat applications.
	Pegasus DFX	chlorothalonil	M5	1.36 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	
Phoma	Daconil Ultrix	chlorothalonil	M5	1.25 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
	Pegasus HPX	chlorothalonil	M5	1.5 - 5.5 pt/acre	12 hours (for next 6.5 days see label for special precautions)	See label for application rates per disease and repeat applications.
	Pegasus DFX	chlorothalonil	M5	1.36 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	
	3336 F	thiophanate-methyl	1	12 - 24 fl oz/100 gal	12 hours	
	3336 WP	thiophanate-methyl	1	12 - 24 fl oz/100 gal	12 hours	
	3336 EG	thiophanate-methyl	1	6 - 24 fl oz/100 gal	12 hours	
	Tip blight (Sirococcus spp.)	Heritage	azoxystrobin	11	1 - 4 oz/100 gal	4 hours
Mural		azoxystrobin + benzovindiflupyr	11 + 7	4 - 7 oz/100 gal	12 hours	Apply every 7 - 21 days.
Daconil Ultrix		chlorothalonil	M5	1.25 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.

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Tip blight ( <i>cont.</i> ) ( <i>Sirococcus</i> spp.)	Pegasus HPX	chlorothalonil	M5	1.5 - 5.5 pt/acre	12 hours (for next 6.5 days see label for special precautions)	See label for application rates per disease and repeat applications.
	Pegasus DFX	chlorothalonil	M5	1.36 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	
	ProPensity 1.3 ME	propiconazole	3	2 - 24 fl oz/100 gal	24 hours	Apply every 14 - 21 days.
	Banner MAXX II	propiconazole	3	2 - 8 fl oz/100 gal	12 hours	
	Banner MAXX	propiconazole	3	5 - 8 fl oz/100 gal	24 hours	
	Concert	propiconazole + chlorothalonil	3 + M5	0.06 - 69 fl oz/100 gal	12 hours	Rate depends on disease. See label.
	Concert II	propiconazole + chlorothalonil	3 + M5	9 - 69 fl oz/100 gal	12 hours	Rate depends on disease. See label.
	Bayleton FLO	triadimefon	3	2 - 8 fl oz/100 gal	12 hours	
	Bayleton 50	triadimefon	3	1 - 16 fl oz/100 gal	12 hours	
	Monochaetia canker	Mancozeb 4 FL	mancozeb	M3	1.2 qt/100 gal	24 hours
Junction		mancozeb + copper hydroxide	M3 + M1	1.5 lb/100 gal (1/2 tbs/gal)	24 hours	Do not apply Junction in a spray solution having less than 6.5 pH as phytotoxicity may occur.
Pestalotia	Protect DF	mancozeb	M3	1 - 2 lb/100 gal	24 hours	See label for additional applications.
Dothistroma needle blight	Mancozeb 4 FL	mancozeb	M3	1.2 qt/100 gal	24 hours	
	Junction	mancozeb + copper hydroxide	M3 + M1	1.5 lb/100 gal (1/2 tbs/gal)	24 hours	Do not apply Junction in a spray solution having less than 6.5 pH as phytotoxicity may occur.

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Rhizosphaeria	Daconil Ultrex	chlorothalonil	M5	1.25 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
Rhizosphaeria	Pegasus HPX	chlorothalonil	M5	1.5 - 5.5 pt/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
Scleroderris canker Sirococcus Diplodia tip blight Phomopsis Rusts	Heritage	azoxystrobin	11	1 - 4 oz/100 gal	4 hours	Apply every 7 - 28 days.
Lophodermium Sirococcus Swiss needlecast Phomopsis Rusts	Mural	azoxystrobin + benzovindiflupyr	11 + 7	4 - 7 oz/100 gal	12 hours	Apply every 7 - 21 days.
Swiss needlecast Sirococcus Interior needle blight Scleroderris canker Rhizosphaeria Scirrhia Cyclaneusma Lophodermium Phomopsis Rhabdocline Rusts	Daconil Ultrex	chlorothalonil	M5	1.25 - 5 lb/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.

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Swiss needlecast Scleroderris canker Rhizosphaeria Sirococcus Scirrhia Cyclaneusma Lophodermium Rhabdocline Rusts	Pegasus HPX	chlorothalonil	M5	1.5 - 5.5 pt/acre	12 hours (for next 6.5 days see label for special precautions)	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
Anthracnose Cercospora Phomopsis Needlecasts	Kocide 2000	copper hydroxide	M1	1.5 - 3 lb/A	24 - 48 hours (see label)	Begin applications in the spring at the initiation of new growth and repeat at 7 - 30 day intervals if needed.
Anthracnose Cercospora Phomopsis Needlecasts	Kocide 3000	copper hydroxide	M1	0.75 - 1.75 lb/A	24 - 48 hours (see label)	Begin applications in the spring at the initiation of new growth and repeat at 7 - 30 day intervals if needed.
Naemacyclus Ismiella Diplodia Pestalotia Phomopsis Sphaeropsis Rusts	Protect DF	mancozeb	M3	1.5 - 5.5 pt/acre	24 hours	For needlecasts, make one application in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.

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Dothistroma Lophodermium Monochaetia canker Phomopsis Scirrhia brown spot Rusts	Mancozeb 4 FL	mancozeb	M3	1 - 2 lb/100 gal	24 hours	
Lophodermium Pine gall rust Scirrhia brown spot Swiss needlecast	Koverall	mancozeb	M3	1 - 2 lb/100 gal		Begin applications in early summer before disease starts.
Cercospora Rusts	Eagle 20 EW	myclobutanil	3	8 fl oz/100 gal	24 hours	Apply as full coverage to the point of drip.
Phomopsis Sirococcus Sphaeropsis Rusts	ProPensity 1.3 ME	propiconazole	3	2 - 24 fl oz/100 gal	24 hours	Apply ProPensity every 14 - 21 days.
Sirococcus Sphaeropsis Rusts	Banner MAXX	propiconazole	3	2 - 8 fl oz/100 gal	24 hours	
Sirococcus Sphaeropsis Rusts	Banner MAXX II	propiconazole	3	5 - 8 fl oz/100 gal	12 hours	
Sirococcus Sphaeropsis Rusts	Concert	propiconazole + chlorothalonil	3 + M5	0.06 - 69 fl oz/100 gal	12 hours	Rate depends on disease. See label.

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Siroccus Sphaeropsis Rusts	Concert II	propiconazole + chlorothalonil	3 + M5	9 - 69 fl oz/100 gal	12 hours	Rate depends on disease. See label.
Diplodia Phomopsis Sphaeropsis Rusts	3336 F	thiophanate-methyl	1	12 - 24 fl oz/100 gal	12 hours	For needlecasts, make one application of thiophanate-methyl in spring when new shoot growth is 1/2 - 2 inches in length. See label for additional applications.
Diplodia Phomopsis Sphaeropsis Rusts	3336 WP	thiophanate-methyl	1	12 - 24 fl oz/100 gal	12 hours	Rate depends on disease. See label.
Diplodia Phomopsis Sphaeropsis Rusts	3336 EG	thiophanate-methyl	1	6 - 24 fl oz/100 gal	12 hours	Rate depends on disease. See label.
Lophodermium Sirococcus Rusts	Bayleton FLO	triadimefon	3	2 - 8 fl oz/100 gal	12 hours	Rate depends on disease. See label.
Lophodermium Sirococcus Rusts	Bayleton 50	triadimefon	3	1 - 16 fl oz/100 gal	12 hours	For rusts, begin when needles break through the fascicle sheath. Make applications at 14 - 21 day intervals.