



Fungicides for Christmas Tree Diseases

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Disease	Hosts	Comments	Materials**
<u>Needlecasts</u>			
Lophodermium	Pines	Begin in mid-Jul; end in mid-Sept, make 3-4 applications @ 2-3* week intervals. (resistant varieties)	chlorothalonil, mancozeb, Spectro®, azoxystrobin, TwoSome®
Cyclaneusma	Scotch, & Austrian pines	1 st * in late Mar or early Apr, 2 nd in mid-May, 3 rd in mid June, 4 th in mid-Aug, 5 th in early-Oct.	chlorothalonil, mancozeb, Spectro®, TwoSome®
Rhizosphaera	Spruces & true firs	1 st * when new shoots 1 1/2" long, 2 nd 1-3 wk later (Col. blue spruce may require a mid-Aug.-Sept. application). Control weeds.	chlorothalonil, copper compounds, mancozeb, Spectro®, TwoSome®
Rhabdocline	Douglas-fir	3* applications [#] ; 1 st when 10% of the trees have broken bud, 2 nd 1 wk later, 3 rd 3 wk after 1 st .	chlorothalonil, copper compounds, TwoSome®, maneb, Spectro®
Swiss	Douglas-fir	2 applications @ 2-3* wk intervals; 1 st when new growth is 1-1 1/2" long. (sprays for Rhabdocline will provide control since timing for Rhabdocline is earlier than for Swiss)	chlorothalonil, Spectro®, TwoSome®, azoxystrobin, Manhandle®, mancozeb
Lethale (Plioderma)	Austrian pines		copper compounds, mancozeb, chlorothalonil
<u>Other Diseases</u>			
Phyllosticta needle blight	Balsam, Fraser, & Concolor firs	Spray when new growth begins, make two additional applications at 10-14* day intervals.	mancozeb
Pine-Pine gall rust	Scotch	Prune out galls, destroy heavily infected trees	mancozeb
Diplodia tip blight (Sphaeropsis)	particularly hard pines, but most conifers are susceptible	1 st when new growth starts, 2 nd just before needles emerge from sheath, 3 rd 10-days later. Use with spreader/sticker, thorough coverage is essential.	mancozeb, thiophanate methyl, copper compounds, azoxystrobin, Spectro®

Delphinella tip blight	Balsam & Concolor firs	1 st application just after bud break, second application 10 days later	chlorothalonil, Bordeaux mixture mancozeb
Phytophthora root rot	Nursery beds	Nursery beds	Banol [®] , Banrot [®] , Subdue [®] , Subdue Maxx [®] , Terrazole [®] , Aliette [®] , Truban [®] , phosphorus acid
Phomopsis tip blight & dieback	most conifers	Common on drought-stressed and frost-injured trees. Avoid low and frost-prone areas. Fungicides are usually not warranted	mancozeb, chlorothalonil, copper compounds
Cytospora canker	most conifers	Prune out cankered branches; destroy trees with trunk cankers.	none
Needle rust	True firs, Douglas-fir Pines	Practice effective weed control.	myclobutanil, azoxystrobin, propiconazole
Repeating spruce rust (Weir's cushion rust)	Spruces	1 st when 10% of trees have broken bud. Weekly until needles are mature (usually 3, but as many as 5 applications in cool, wet seasons)	chlorothalonil
Yellow broom rust	True firs	Control chickweed, remove brooms.	none
White pine blister rust	White pine	Control currants & gooseberries up to 1000 ft around plantation.	none
Sirococcus blight	Spruces, Hard pines, & Douglas-fir	(Refer to Scleroderris canker)	chlorothalonil, mancozeb, azoxystrobin, triadimefon, copper compounds, TwoSome [®] ,
Sooty mold	all species	Control sucking insects.	
Armillaria root rot	all species	Remove stumps from recently cleared fields, do not stump-plant	none

** FOLLOW LABEL DIRECTIONS CAREFULLY!

* Interval depends upon weather and material used.

Cease application when Rhabdocline fruiting bodies turn from orange/red to brown/black.

Note: Since most needlecast fungi begin their attack on the lower branches, it is **essential** to get good coverage on the bottom whorls of branches. (also, control weeds)

It is the responsibility of the applicator and/or grower to check pesticide labels for current host plant clearance, dosage recommendations, safety information, and phytotoxicity information. Where trade names are used, no discrimination is intended, and no endorsement implied by the University of New Hampshire Cooperative Extension. Pesticides listed are registered in New Hampshire, registrations in other states may differ.

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