

## Needlecasts

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The spores of needlecast diseases of conifers infect needles when the humidity is high and the leaves are wet. The most severe infections usually occur on the bottom half of the tree and on the shaded northern side. The disease is most severe at these sites because water tends to remain on the foliage for long periods, and this moisture favors spore germination. Dense foliage dries slowly and increases within-tree spread of disease from branch to branch. Tree-to-tree spread is increased by close spacing of trees that allows rain to splash spores from diseased to healthy trees.

Control: Most fungal diseases of conifers can be partially controlled by several cultural practices.

- Avoid planting in low areas, depressions or shady areas where soil moisture, humidity and dew tend to remain high for prolonged periods.
- Plant so that air can circulate freely around trees. Avoid dense plantings.
- Control weeds and tall grasses so that weed growth does not favor the build-up of humidity and moisture around the lower branches. Controlling weeds by using herbicides or mowing may also eliminate goldenrod, which is the source of pine needle rust spores.
- Avoid drought sites that stress trees. Serious infections of tip blight (*Diplodia*) and cankers are often associated with poor sites.
- Maintain tree vigor by watering during the periodic droughts of summer. Early spring fertilization can help a

diseased tree recuperate.

-- Buy only clean and healthy nursery stock to reduce the chance of bringing disease to your landscape. Remember that most needlecasts are spread by rain splash, so distance of spread is limited. Lophodermium needlecast is spread by wind-borne rather than rain-splashed spores.

-- Of course, always avoid planting young trees near older, diseased landscape plantings, wind-breaks or woodlots.

-- Prune trees in dry weather.