

# From The Bedford Extension Master Gardener HELP DESK

Editor: Betsy B., Bedford Extension Master Gardener Help Desk  
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## BLUE SPRUCE TREES NEEDLE CAST DISEASE

### QUESTION

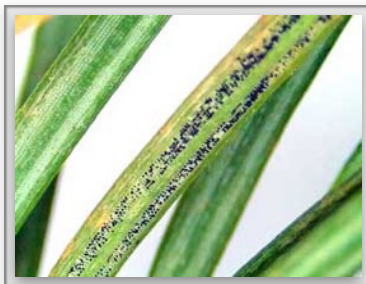
The client asked for help for a 27-year-old blue spruce tree that was showing signs of decline and thinning. The tree has 1700 lights that are lit from Thanksgiving to Christmas each year.

### DIAGNOSIS / RECOMMENDATION

Samples of the needles and soil were sent to the Plant Disease Diagnostic Lab. The primary problem is *Rhizosphaera* needle cast (*Rhizosphaera kalkhoffii*), although spruce mite (*Oligonychus ununguis*) also was present. To control the disease, spring applications of preventative fungicides are recommended: the first beginning when new growth is 0.5 to 2 inches long and then again at 3-4 week intervals until conditions are no longer favorable or when needles are full length (see VT PMG Table 4-2, page 4-25 for currently recommended fungicides).



*Rhizosphaera* Needle Cast of Spruce  
[entoweb.okstate.edu](http://entoweb.okstate.edu)



*Rhizosphaera* Fruiting Bodies on  
Blue Spruce Needles [msue.anr.edu](http://msue.anr.edu)

### ADDITIONAL INFORMATION

Needle cast is a common disease of spruce trees and can result in defoliation and tree death if not controlled. It is more prevalent on trees that are under stress from drought or poor conditions [1, 2, 3].

The pathogen overwinters on living and recently killed needles. Spores, called conidia, are dispersed by splashing water spring through early autumn [2, 3]. Even though new infections can occur through out the summer, fungicidal sprays are most effective during the early part of the summer when conditions typically are wetter. Cleaning up the fallen needles and minimizing any water splash are important cultural control measures [2]. Damage starts from the lower branches and moves upward.

The spruce mite also can cause serious damage and defoliation. Dormant oils applied in late winter will control the overwintering eggs. In addition, an application of insecticidal soap is recommended in May [4] (also see VT PMG Table 4-5, page 4-52).

With respect to the client's original question, the lights on the tree likely will not affect either the disease or mites.

For additional information, go to websites listed below.

## RESOURCE LINKS

[1] <http://extension.psu.edu/pests/ipm/agriculture/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/rhizosphaera-needle-cast.pdf>

[2] <http://www.extension.umn.edu/garden/yard-garden/trees-shrubs/spruce-tree-diseases/rhizosphaera-needle-cast/>

[3] [https://www.ppws.vt.edu/extension/plant-disease-clinic/DiseaseAdvisory/Archives/102014\\_RhizosphaeraNeedleCastOnSpruce.html](https://www.ppws.vt.edu/extension/plant-disease-clinic/DiseaseAdvisory/Archives/102014_RhizosphaeraNeedleCastOnSpruce.html)

[4] [https://pubs.ext.vt.edu/444/444-235/444-235\\_pdf.pdf](https://pubs.ext.vt.edu/444/444-235/444-235_pdf.pdf)

*All resource links accessed September 8, 2016*

Answers provided herein were based on specific situations and growing conditions.

These recommendations may or may not be appropriate for all circumstances.

For specific recommendations for your particular situation please contact your local Cooperative Extension Office.

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### MASTER GARDENER HELP DESK

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