



# DISEASES OF EVERGREEN TREES

## EVERGREEN DISEASES

### Western Gall Rust

#### Identification

- Mostly on ponderosa pine, but also Scotch, Austrian and jack pine
- Ball-shaped woody galls appear on stems
- Trees with lots of galls may grow slowly
- Branches with lots of galls may be killed



#### Control

- Prune out galls and remove severely affected trees to reduce the spread of the disease

### Dothistroma Needle Blight

#### Identification

- On Austrian and ponderosa pines
- Needles turn brown at the tip first, then the entire needle
- Needles have many dark spots or bands
- Older interior needles are affected more than the younger outer needles
- Bottom of the tree is affected more than the top



#### Control

- Spray trees with copper salts of fatty and rosin acids (Camelot) or Bordeaux mixture\* as needles are emerging (mid-May) and after new growth has occurred (mid to late June)
- Increase air flow around trees by removing some of the trees, such as every other one

### About the Forest Health Program

The Forest Health Program provides programming for the state of Nebraska in forest and tree insects, diseases and environmental issues.



Diseases of evergreen trees and shrubs are often fatal if not detected quickly. Use this guide to help spot signs and symptoms of common diseases that affect evergreens in Nebraska.

For more information on Diseases of Broadleaf Trees please visit [www.nfs.unl.edu](http://www.nfs.unl.edu).

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## Pine Wilt

### Identification

- Mostly on Scotch and Austrian pines
- Caused by nematodes carried by wood boring beetles
- Tree dies quickly (often within 2 to 3 months)
- Green foliage fades to light brown
- Cut wood surfaces are not sticky



### Control

- Destroy trees by chipping, burning or burying
- During summer, destroy trees within 1 month of fading green color
- In fall and winter destroy trees by end of April
- Trunk injection treatment with abamectin (Greyhound, Aracinate)\* on high-value trees can provide some protection

## Cytospora Canker

### Identification

- On Colorado blue spruce, white spruce (including the Black Hills) and Norway spruce
- Branches and tops of trees may be killed
- Resin oozes from branches or the trunk
- The inner bark has brown, dead areas
- Usually on trees at least 10-15 years old



### Control

- Improve tree health by mulching with wood or bark chips and watering about 1 inch per week. Avoid overwatering

## Brown Spot Needle Blight

### Identification

- On Scotch and ponderosa pines.
- Symptoms similar to Dothistroma needle blight



### Control

- Spray when needles are half grown (June) with chlorothalonil (Daconil, Fung-onil), Bordeaux mixture or mancozeb (Dithane, Fore)\* and 3 to 4 weeks later if frequent rains occur

## Cercospora Blight

### Identification

- Mostly on juniper, but also redcedar
- Mostly in windbreaks and dense plantings
- Foliage dies and falls off, typically from the inside out and bottom up
- Small tufts of new foliage often grow out from the sides of stems that have been defoliated



### Control

- Spray trees with a fungicide containing copper salts of fatty and rosin acids (Camelot), Bordeaux mixture or mancozeb (Dithane, Fore)\* in mid-June, late July and at monthly intervals if frequent rains occur in August and September
- Increase air flow around trees by removing some of the trees, such as every other one

## Diplodia (Sphaeropsis) Blight

### Identification

- On Austrian, ponderosa and other pines
- Shoot tips die in the spring
- Whole branches and the entire tree may die if the tree is stressed by injuries to stem or roots, dry soil or other poor soil conditions
- May look similar to pine wilt, but branches will usually have dead shoot tips with short needles
- More common in trees older than 25 years
- Small black fruiting bodies appear on cones and at the base of short needles that have been dead one year or more



### Control

- Spray branch tips thoroughly when new growth starts (around the third week of April), just before needles emerge from sheaths, and 7-14 days later according to the label with thiophanatemethyl (3336, Fungo), propiconazole (Banner MAXX), copper salts of fatty and rosin acids (Camelot) or Bordeaux mixture\*
- Improve tree health by mulching with wood or bark chips and watering about 1 inch per week. Avoid overwatering

## Cedar-Apple Rust

### Identification

- On redcedar and juniper.
- Hard, brown ball-shaped galls on the stems produce orange gelatinous masses after early rains in the spring
- Branches may be killed or broken down by numerous galls



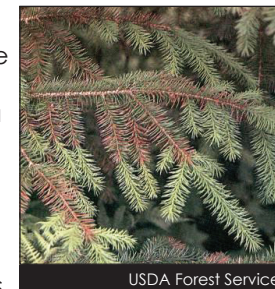
### Control

- Usually not needed on redcedar or juniper
- Can reduce the problem by controlling the disease on the alternate hosts: apple and crabapple

## Needle Cast of Spruce

### Identification

- On Colorado blue spruce and other spruces
- Caused by Rhizosphaera and other fungal pathogens
- Mostly in eastern Nebraska
- Needles turn reddish brown and develop rows of tiny black dots visible under magnification
- Mostly on older needles, needles low on the tree and needles in shaded areas of the tree



### Control

- Prune out dead branches 8-12 inches down from diseased tissue
- Sterilize pruning tools after each cut with a 70% alcohol solution
- Spray with streptomycin (Agri-Mycin)\* at pink stage (3 to 4 days before blossoms open—usually mid-April) and every 5 to 7 days until petal drop

## Sirococcus Shoot Blight

### Identification

- On Colorado blue spruce and other spruces
- Young shoots are killed and sometimes droop
- Needles drop early

### Control

- Spray trees with chlorothalonil (Daconil, Bravo)\* when shoots are 1/2 to 2 inches in length (May) and every 3 to 4 weeks if frequent rains occur

