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The University of Tennessee Agricultural Extension Service

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Phomopsis Blight of Juniper

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Originally developed by Nancy J. Taylor, Pesticide Impact Assessment Coordinator

Junipers are very susceptible to a disease known as Phomopsis blight, juniper twig blight or juniper tip blight. This disease is most severe on juniper, red cedar and horticultural varieties of these plants. It also occurs on arborvitae (*Thuja* or *Platycladus*), cypress (*Cupressus*), Douglas fir (*Pseudotsuga*), fir (*Abies*), hemlock (*Tsuga*), larch (*Larix*), redwood (*Sequoia*), white cedar (*Chamaecyparis*) and yew (*Taxus*). Phomopsis blight can be a real problem in nurseries or where plants are growing close together.

Symptoms

Young succulent leaves (scales) are most susceptible to Phomopsis blight. Symptoms of the disease are found on lower branches or in the center of the plant, where yellowing and dying of scales will first be noticed.

As the disease progresses, the tips of small twigs and branches will turn light green, then brown. The dead foliage becomes ash-gray and develops small black spots. These spots are reproductive structures of the fungus, called pycnidia. They are pin-point in size and can easily be seen with a magnifying glass, often with the bare eye.

Cankers develop between living and dead branch tissue. Small branches (0.4 inch or one centimeter in diameter) are girdled. A larger branch may die slowly.

NOTE: Winter injury, frost damage, drought, dog urine, poor drainage, phytophthora, root rot and transplant shock cause symptoms similar to Phomopsis blight. These do not cause cankers, and the black pycnidia will not be present.

Life Cycle

The fungus *Phomopsis juniperovora* overwinters in infected plant parts. The disease can become a problem anytime foliage is wet.

Infections commonly occur in the spring (April, May or early June) and fall (late August and September) during rainy weather.

Mature needles or scales are not as susceptible to the disease as young, succulent new growth. During wet weather, spores ooze out of the black pycnidia in white tendrils and are blown or splashed onto young healthy tissue or may be spread on pruning tools. Infection occurs only when foliage is wet.

The fungus grows into twigs and causes cankers on small branches which may be girdled. Older, larger branches are not usually killed but may die over several years. The stem tip dies and black pycnidia are produced. Symptoms are usually observed a few weeks after infection. Pycnidia and spores can be produced in dead tissue for two years.

Control

Non-chemical

Keep foliage as dry as possible to reduce problems with Phomopsis blight. The practices listed below will aid in disease control.

- Do not buy plants with dead or dying tips.
- Do not plant juniper in heavy shade or poorly drained soils.
- Avoid sprinkler or overhead irrigation, especially in the evening or at night when foliage will not dry quickly.

- Prune and space plants to encourage good air circulation and rapid drying of foliage.
- Do not handle plants when wet.
- Prune diseased branches as soon as possible, but only when plant is dry. Prune about two inches into live wood. Destroy prunings.
- Avoid injuries, such as mower damage.
- Grow resistant varieties.

Chemical

New foliage needs to be protected; therefore, fungicides are needed when new flushes of growth are occurring in the spring and fall, or anytime after shearing. Cleary's 3336 (thiophanate methyl) should be applied at bud break and at 10- to 14-day intervals until new growth is mature. Zyban or mancozeb (Fore, Dithane T/O) should be applied at 7-day intervals. Follow label directions for the amounts to apply. If available, a spreader-sticker should be used, particularly with Fore or Dithane T/O.



Juniper Varieties Resistant to Phomopsis Blight

Juniperus chinensis

- cv. Femina*
- Iowa
- Keteleeri*
- Pfitzeriana Aurea
- Robusta
- var. sargentii
- sargentii, cv. Glauca
- cv. Shoosmith

Juniperus horizontalis

- cv. Depressa
- cv. Depressa Aurea
- Procumbens

Juniperus scopulorum

- cv. Silver King

Juniperus virginiana

- cv. Tripartita*

Juniperus communis

- cv. Ashfordii
- Aureo-spica*
- depressa*
- Hulkjaerhus
- Prostrata Aurea
- Repanda
- var. saxatilis
- cv. Suecia*

Juniperus sabina

- cv. Broadmoor
- Knap Hill
- Skandia

Juniperus squamata

- cv. Campbellii
- var. fargesii
- cv. Prostrata
- Pumila

**Also reported resistant to cedar-apple rust.*

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Billy G. Hicks, Dean