

## Juniper Tip Blight

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Tip blight of juniper is a fungal disease caused by either *Phomopsis juniperovora* or *Kabatina juniperi* and is present through the eastern United States. Both fungi cause tip dieback and twig cankers, which result in a weakened and disfigured plant. If infection is very severe, the disease can kill the plant. Secondary pests can also move in after the plant is stressed and contribute to its demise. It affects mainly juniper but may also be found on cedar, cypress, arborvitae, fir, larch, yew, and some other conifers.

### Symptoms

*Phomopsis* may infect young, healthy needles any time during the spring or summer; mature needles are resistant. Needles turn yellow then brown within weeks of infection (Figure 1). The infection then moves down into the branch tips which turn tan or grayish as the tissue is killed. Small, black fungal fruiting bodies (pycnidia) develop on the dead needles and twigs one to two months after infection.

**Figure 1: *Phomopsis* tip blight on juniper**



*Kabatina* enters the plant through wounds made by insects, winter injury, or pruning. The resulting dieback symptoms are very similar to those of *Phomopsis*. Fungal fruiting bodies form on twigs and

needles; they are indistinguishable in the field from those of *Phomopsis*.

### Management

Management of these two diseases is essentially the same. To reduce potential problems, it is best to start with healthy plants. To maintain vigor, mulch appropriately, water, fertilize, and be sure the plant is located in full sun if possible. Irrigation should be applied during dry periods in the spring and summer. Avoid sprinklers, which wet the needles, by using a soaker hose or drip irrigation system. Take care not to over irrigate as junipers planted in poorly drained or overwatered sites are more likely to become infected with *Phytophthora* root rot. Junipers prefer full sun and sunlight improves drying conditions. If overstory trees are present, they may be thinned to improve light conditions. If the juniper is nutrient deficient, fertilization will improve vitality and reduce disease impact.

For infected plants, all of the above recommendations should be followed as well as pruning and applying appropriate fungicides. Dead tips may be pruned to improve the appearance of the plant. Pruning is best done during dry weather in late summer or in the winter to avoid creating wounds that may become infected.

When replacing plants, select resistant varieties when possible (Tables 1 and 2).

**Table 1: Plants Resistant to *Phomopsis***

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**Arborvitae (*Thuja* spp.)**

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*T. occidentalis* ‘Ellwangeriana’  
*T. occidentalis* ‘Lutescens’

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**Juniper (*Juniperus* spp.)**

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*J. chinensis* ‘Femina’  
*J. chinensis* ‘Iowa’  
*J. chinensis* ‘Globosa’  
*J. chinensis* ‘Hetzii’  
*J. chinensis* ‘Keleleeri’  
*J. chinensis* ‘Mas’  
*J. chinensis* ‘Mountbatten’  
*J. chinensis* ‘Repanda’  
*J. chinensis* ‘Pfitzeriana’  
*J. chinensis* ‘Sargentii’  
*J. chinensis* ‘Sargentii Glauca’  
*J. chinensis* ‘Shoosmith’  
*J. chinensis* ‘Robusta’

*J. horizontalis* ‘Douglasii’  
*J. horizontalis* ‘Procumbens’

*J. sabina* ‘Broadmoor’  
*J. sabina* ‘Skandia’  
*J. sabina* ‘Knap Kill’  
*J. sabina* ‘Arcadia’  
*J. sabina* ‘Buffalo’  
*J. sabina* ‘Calgary Carpet’

*J. communis* ‘Ashfordi’  
*J. communis* ‘Aureospica’  
*J. communis* ‘Depressa’  
*J. communis* ‘Depressa Aurea’  
*J. communis* ‘Hillii’

*J. communis* ‘Hulkjaerhus’  
*J. communis* ‘Oblonga Pendula’  
*J. communis* ‘Prostrata Aurea’  
*J. communis* ‘Saxatalis’  
*J. communis* ‘Suecia’  
*J. communis* ‘Tripartita’

*J. conferta*

*J. scopulorum* ‘Silver King’

*J. squamata* ‘Campellii’  
*J. squamata* ‘Fargesii’  
*J. squamata* ‘Prostrata’  
*J. squamata* ‘Pumila’

*J. virginiana* ‘Tripartita’

**Table 2: Plants Resistant to *Kabatina***

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**Juniper (*Juniperus* spp.)**

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*J. chinensis* ‘Aurea Gold Coast’  
*J. chinensis* ‘Hetzi glauca’  
*J. chinensis* ‘Pfitzeriana’  
*J. chinensis* ‘Mas’  
*J. chinensis* ‘Sargenti Viridis’  
*J. chinensis* ‘Pfitzeriana Aurea’  
*J. chinensis* ‘Sargenti Glauca’

*J. communis* ‘Hornbrooki’  
*J. horizontalis* ‘Marcellus’  
*J. procumbens* ‘Nana’  
*J. procumbens* ‘Variegata’  
*J. sabina* ‘Tamariscifolia’  
*J. virginiana* ‘Prostrata Glauca’