

Juniper Tip Blight

Adam Blalock and Dr. Fulya Baysal-Gurel

Juniper tip blight is caused by one or two fungal pathogens, Kabatina tip blight (*Kabatina juniperi*) and/or Phomopsis tip blight (*Phomopsis juniperovora*). Both pathogens commonly infect young first year shoots, but can occasionally infect older shoots and stems. Similar to other blight causing diseases, once an infection has begun, juniper tips will rapidly turn brown and die (Fig 1 and 2).

Kabatina tip blight generally first becomes noticeable on junipers during or shortly after cold dry periods from mid to late winter. Phomopsis tip blight on the other hand, most commonly shows up during late spring and fall when weather is cool and wet. Phomopsis tip blight can be devastating in seedling production beds where plant to plant contact can aid in the spread of the disease. In addition to junipers, other conifer species at risk for Kabatina and Phomopsis tip blights are *Cryptomeria*, *Chamaecyparis* and *Thuja*.



Fig. 1. Severe juniper tip blight on *J. chinensis* 'Spartan'.

The fungal pathogens that cause Juniper tip blights simply girdle the young stems and shoots and cause them to die. If you look closely at the base of a killed shoot, a sunken gray area with small black spots can often be seen (Fig 3). These black dots are the fruiting bodies of the fungus (Fig. 4). The spores of both species are dispersed by splashing water. The spores of Kabatina tip blight can

only enter the plant through an open wound. The spores of the Phomopsis tip blight fungus can infect healthy tissue.

The best method for controlling juniper tip blight is through good cultural practices and sanitation. As soon as tip blight becomes evident, the diseased shoots should be pruned out and destroyed since the dead juniper tips can continue to produce spores for up to 2 years. Cut several



Fig. 2. Juniper tip blight on *Juniperus chinensis* 'Spartan'.

inches below the infection and disinfect pruners often using a 10% bleach solution, 70% alcohol solution or other commercially available product (Greenshield, OxiDate etc.). Sanitize equipment, at a minimum, between each plant. Avoid pruning on a rainy, wet day, which might spread the disease.

If this disease is a recurring problem, consider planting junipers with a known resistance to Kabatina or Phomopsis tip blight (Table 1). Also, place plants in blocks with good airflow and proper drainage. Controlling weeds that grow on or up through the plants late in the season will help improve air circulation and reduce humidity that might encourage the spread and growth of the disease. Fungicide applications (certain copper-based fungicides, mancozeb, thiophanate-methyl) should begin in early spring at 7-21 days intervals for Phomopsis tip blight and in the fall for Kabatina tip blight.

Table 1. A selected list of juniper species with known resistance to *Kabatina juniperi* and/or *Phomopsis juniperovora*.

Species	<i>Kabatina juniperi</i>	<i>Phomopsis juniperovora</i>
<i>J. chinensis</i> 'Femina'		Resistant
<i>J. chinensis</i> 'Hetzii Glauca'	Resistant	
<i>J. chinensis</i> 'Iowa'		Resistant
<i>J. chinensis</i> 'Keteleeri'	Resistant	Resistant
<i>J. chinensis</i> 'Mountbatten'	Resistant	Resistant
<i>J. chinensis</i> 'Pfitzeriana'	Resistant	Resistant
<i>J. chinensis</i> 'Pfitzeriana Aurea'	Resistant	Resistant
<i>J. chinensis</i> 'Robusta'		Resistant
<i>J. chinensis</i> 'Robusta Green'	Resistant	Resistant
<i>J. chinensis</i> var. <i>sargentii</i>		Resistant
<i>J. chinensis</i> var. <i>sargentii</i> 'Glauca'	Resistant	Resistant
<i>J. chinensis</i> var. <i>sargentii</i> 'Viridis'	Resistant	
<i>J. chinensis</i> 'Wintergreen'	Resistant	Resistant
<i>J. communis</i> 'Ashfordii'		Resistant
<i>J. communis</i> 'Aurea'		Resistant
<i>J. communis</i> 'Aurea-spica'		Resistant
<i>J. communis</i> 'Depressa'		Resistant
<i>J. communis</i> 'Hornibrooki'	Resistant	
<i>J. communis</i> 'Hulkjaerhus'		Resistant
<i>J. communis</i> 'Repanda'		Resistant
<i>J. conferta</i>		Resistant
<i>J. horizontalis</i> 'Depressa Aurea'		Resistant
<i>J. horizontalis</i> 'Marcella'	Resistant	
<i>J. sabina</i> 'Arcadia'		Resistant
<i>J. sabina</i> 'Broadmoor'		Resistant
<i>J. sabina</i> 'Knap Hill'		Resistant
<i>J. sabina</i> 'Skandia'		Resistant
<i>J. scopulorum</i> 'Silver King'		Resistant
<i>J. squamata</i> 'Campbellii'		Resistant
<i>J. squamata</i> 'Prostrata'	Resistant	Resistant
<i>J. squamata</i> 'Pumila'		Resistant
<i>J. squamata</i> var. <i>fargesii</i>		Resistant
<i>J. virginiana</i> 'Prostrata Glauca'	Resistant	
<i>J. virginiana</i> 'Tripartita'		Resistant

Source: Juniper Tip Blight, Publication 450-601, Virginia Cooperative Extension



Fig. 3 (left). At the base of a dying juniper tip, associated with juniper tip blight, you will often see a sunken gray area with tiny black dots. **(Fig. 4)** Black spots are the fruiting bodies of the blight causing. Microscopic evaluation is necessary to determine if a fungus is present.