



Juniper Twig Blight

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Twig blight of juniper is a fungal disease caused by either *Phomopsis juniperovora* or *Kabatina juniperi*. Both fungi cause dieback and cankers, which result in a weakened and disfigured plant. If infection is very severe it can kill plants. Secondary pests can also move in after the plant is stressed and eventually kill it.

The disease is present across the eastern United States. It affects mainly *junipers* but may also be found on *cedars*, *cypress*, *arborvitae*, *firs*, *larch* and *yews*.

SYMPTOMS

Phomopsis infects young healthy needles during any period in the spring or summer. Needles turn yellow then brown within weeks of infection, mature needles are resistant. The infection kills branch tips, which then turn tan to brown or gray. Small black fungal fruiting bodies (pycnidia) develop on the dead needles and twigs one to two months after infection.



Kabatina enters the plant through wounds made by insects, winter injury or pruning. The resulting dieback symptom is very similar to that of *Phomopsis*. Fungal fruiting bodies (acervuli) 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 maintain a vigorous plant. To maintain vigor, mulch, water, fertilize and maintain full sun conditions. Irrigation should be applied during dry periods in the spring and summer. Avoid sprinklers, which wet the needles. Instead use a soaker hose or drip system. Take care not to over irrigate since junipers, which receive excess water or are in poorly drained sites are more likely to become infected with *Phytophthora* root rot. Since Junipers prefer full sun and full sun improves drying conditions, they are best grown without shade. If overstory trees are present they may be thinned to improve light conditions. If the tree is nutrient deficient, fertilization will improve tree vitality and reduce disease impact.

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

Fungicide applications should begin at budbreak and be repeated twice at 14-day intervals. Sprays should be continued at

monthly intervals throughout the summer if wet weather persists.

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

Table 1. Plants Resistant to Phomopsis

T. occidentalis 'Ellwangeriana'
T. occidentalis 'Lutescens'

Juniper (Juniperus)

J. chinensis 'Femina'
J. chinensis 'Iowa'
J. chinensis 'Keleleeri'
J. chinensis 'Repanda'
J. chinensis 'Pfitzeriana'
J. chinensis 'Sargentii'
J. chinensis 'Sargentii Glauca'
J. chinensis 'Shoosmith'
J. chinensis 'Robusta'

J. communis 'Ashfordi'
J. communis 'Aureospica'
J. communis 'Depressa'
J. communis 'Depressa aurea'
J. communis 'Hillii'
J. communis 'Hulkjaerhus'
J. communis 'Prostrata aurea'
J. communis 'Saxatalis'
J. communis 'Suecia'
J. communis 'Tripartita'
J. 'conferta'

J. sabina 'Broadmoor '
J. sabina 'Skandia'
J. sabina 'Knap Kill'
J. sabina 'Arcadia'
J. sabina 'Buffalo'
J. sabina 'Calgary Carpet'

J. squamata 'Campellii'
J. squamata 'Fargesii'
J. squamata 'Prostrata'
J. squamata 'Pumila'

J. virginiana 'Tripartita'

Table 2. Plants Resistant to Kabatina

Juniper (Juniperus)

J. chinensis 'Aurea Gold Coast'
J. chinensis 'Hetzi glauca'
J. chinensis 'Pfitzeriana '
J. chinensis 'Pfitzeriana aurea'
J. chinensis 'Sargenti viridis'
J. chinensis 'Sargenti glauce'

J. communis 'Hornbrooki'
J. horizontalis 'Marcellus'
J. procumbans 'Nana'
J. procumbans 'Variegata'
J. sabina 'Tamariscifolia'
J. virginiana 'Prostrata glauca'