



Juniper

Juniperus spp.



Propagation

Junipers are usually propagated by semi-hardwood secondary cuttings that may be taken in summer or winter depending on the type of juniper. Rooting hormone use depends on cultivar, and ranges from none to IBA Quick Dip 12000 PPM. Rooting time under intermittent mist may take 4 to 24 weeks depending on cultivar. For more details on type of wood to cut, hormones to use and length of time to rooting, check by cultivar on the University of Florida Landscape Plant Propagation Information website at <http://hort.ifas.ufl.edu/lppi/>.

Pests and Diseases

The current Insect Management Guide for Commercial Foliage and Woody Ornamentals can be found at <http://edis.ifas.ufl.edu/IG012>. The current Professional Disease Management Guide for Ornamental Plants can be found at <http://edis.ifas.ufl.edu/PP123>.

Spider mites



Spider Mites

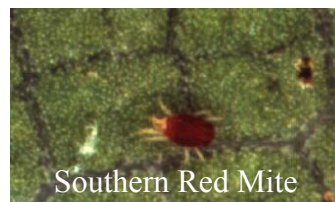
Recognition: Tiny (less than 1/50 inch) eight-legged mites are found most commonly on the undersides of leaves. Eggs, cast skins and silken webs are also signs of mites. Mites feed with piercing-sucking mouthparts, causing the foliage to become pale or off-color. Common mite pests of junipers include two-spotted spider mites, spruce spider mites, and southern red mites.

Contributing factors: Southern red mites and spruce spider mites are most prevalent in the cool season, whereas two-spotted spider mites prefer hot, dry weather.

Management recommendations: Shake branches over a white piece of paper to monitor for mites. Check for predaceous mites as well,



Two-spotted Mites



Southern Red Mite

which are larger and move more quickly. Insecticidal soaps, horticultural oils, or approved miticides may be used to control mites when necessary. Multiple applications may be required.

Webworm (*Glyphidocera juniperella*)



Recognition: Symptoms show up in the spring as the death of individual stems, which turn red in color. The damage is caused by webworm caterpillars, which are about ½ inch long, tan to dark brown in color. The foliage and soil particles at the base of the plant may be held together by webbing. The caterpillars feed on dead or living foliage, but during the winter will feed on bark and girdle the stem.

Contributing factors: This pest primarily infests spreading or low-growing, ground cover types of junipers. The girdling damage occurs only during the winter, but symptoms are not evident until spring.

Management recommendations: Remove dead branches at the base. Apply an insecticide to control larval populations in the fall, only if this pest has been a problem in previous years.

Mushroom Root Rot (*Armillaria tabascens*)



Recognition: Mushroom root rot causes a slow decline and thinning plant canopy. Desiccated foliage on affected stems has a gray-green coloration, which then turns brown. One or more stems may be killed. Bark removal at the base of the plant will reveal white, mat-like fungal growth (mycelium). Clusters of honey-colored mushrooms can sometimes be observed emerging from the trunk or roots nearby.

Contributing factors: Mushroom root rot is a wood rot fungus which colonizes old roots and stumps as well as living plants. This disease often occurs when plants reach old age. It can spread from one plant to others nearby through root grafts.

Management recommendations: There is no control for this disease. Remove the diseased plant as well as adjacent ones in a hedge. Remove roots and soil and replace with clean topsoil, or use a soil fumigant before replanting.

Rhizoctonia web blight (*Rhizoctonia solani*)

Recognition: Web blight on junipers appears as random areas of dead foliage. Both old and new growth are involved. The threadlike strands of fungal hyphae can be seen with a 10x hand lens.



Contributing factors: The aerial blight phase of *Rhizoctonia* is favored by hot summer temperature and ample water. The fungus is soil borne, but splashes up into the foliage to initiate web blight. The same fungus may



cause root rot or stem rot and affects many ornamental plant species.

Management recommendations: Minimize overhead irrigation on juniper beds. Prune to improve air circulation and enhance drying out. Fungicide applications may be needed for control.

Tip blight (*Phomopsis juniperovora*)

Recognition: New growth is affected, with the tips turning light gray-green then tan, then ashy grey. Disease progresses from the tip backwards, and may cause small branches to die. Small black reproductive structures of the fungus may be visible with a hand lens.



Contributing factors: Tip blight usually affects only young plants. The disease may follow other stresses such as mites or pesticide phytotoxicity. High humidity and cool temperatures (<75°F) are necessary for spore germination, but disease development is promoted at higher temperatures (79-90°F).

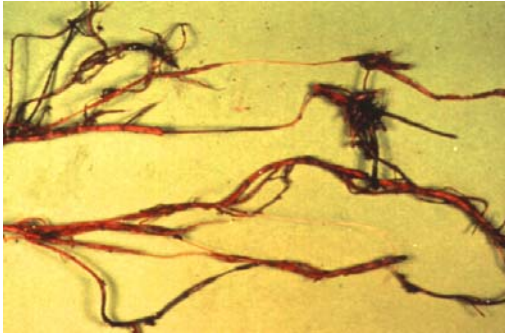
Management recommendations: Landscape plants will usually outgrow the disease. Damaged branches can be pruned out. New plantings may be protected with fungicide applications when environmental conditions are favorable for the disease.

Wet root rot diseases (*Phytophthora* and *Pythium* spp.)



Recognition: Junipers first exhibit off-color foliage, pale green progressing to yellow to brown. The plants die from the inside out, with the oldest foliage affected first. Above-ground symptoms may be one-sided on the plant. Wet rots cause a soft decay of the outer layers of roots, which can be easily stripped off between two fingers, leaving the firm, white stele intact.

Contributing factors: The disease is triggered by periods of excessive soil moisture. Conditions that favor disease development include planting too deep, poor drainage, shallow rooting, and poor water management.



Management recommendations: Check roots of nursery-grown plants before planting into the landscape. Provide adequate drainage, and reduce irrigation. Apply labeled fungicides if problem is diagnosed early and cultural problems corrected.

Sources

1. Cathy Neal, Celeste White and Eleanor Foerste. Key Plant and Key Pests in Central Florida Landscapes. University of Florida Extension slide set.
2. University of Florida Landscape Plant Propagation Information.
<http://hort.ufl.edu/lppi/>
3. Dewayne Ingram and William Barrick 2003. Junipers in Florida.
<http://edis.ifas.ufl.edu/MG109>

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