



Arkansas Plant Health Clinic Newsletter

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Spruce

It is time to spray spruces for needle cast disease caused by *Rhizosphaera kalkhoffii*. This is the most widespread problem of species of spruce in the landscape. The disease usually starts at the bottom (inside near the trunk) of the tree and progresses outward and upward. The needles will take on a brown or purplish color and then fall to the ground. The first visible signs of infection occur one year after infection in the late fall or spring. Last year's needles turn yellow, then purplish brown and fall from the tree, while the new needles remain green. These new green needles become infected the spring they emerge and fall to the ground the following season. Small black fruiting bodies (pycnidia) of the fungus may be observed with a hand lens. They appear on the needles in linear rows. Watch your trees for new growth, (candles), emerging at the tips of branches. Protective sprays applied when new needles are half-emerged from the candles provide satisfactory control. Products containing chlorothalonil such as Bravo or Daconil, and manganese/zinc such as Cleary's Protect T/O are labeled for control of *Rhizosphaera* needle cast. Follow label directions for rate and frequency of application. Blue spruces grow

best in fertile, well drained, moist soil. They dislike compacted soils. When stressed by drought or poor soil they are prone to needle cast.

Spruce *Rhizosphaera* Needle Cast-*Rhizosphaera kalkhoffii*



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension



Spruce Rhizosphaera Needle Cast-*Rhizosphaera kalkhoffii*



Photo by USDA Forest Service - North Central Research Station Archive, USDA Forest Service, Bugwood.org

Asparagus

Asparagus is a favorite spring vegetable wherever it is grown. It is now available year-round in U.S. markets. Asparagus spear rot caused by *Phytophthora megasperma* is a severe problem in warmer areas of the U.S.

Symptoms are soft water-soaked spots on the spears slightly above, or below the soil line. The lesions expand as they age, eventually collapsing and shriveling. This collapse causes the spear to bend like a shepherd's crook. The internal tissues become discolored, turning brown to black as the crown rots. The extent of the damage depends on rainfall and soil drainage. Mefenoxam is effective but must be used cautiously to avoid promoting resistant strains. This problem mostly occurs on heavy soils that are consistently over watered by either rainfall or too much irrigation. It is critical to water properly and improve drainage.

Espárragos by Keiddy Urrea

Espárragos es son uno de los vegetales favoritos en la primavera y se encuentran disponibles durante todo el año en los supermercados de los Estados Unidos. En zonas cálidas del país, la enfermedad conocida como gomosis o podredumbre del cuello causada por el oomyceto *Phytophthora megasperma*, es una de las enfermedades más importantes de este cultivo. Los primeros síntomas aparecen como manchas ovales con apariencia húmeda en los tallos, estas manchas se pueden presentar en los tallos o coronas de las plantas que se encuentran por encima de la línea del suelo o por debajo de esta. A media que avanza la infección el tallo o la corona toman un color marrón oscuro o negro y se empiezan a pudrir, y la planta puede colapsar. La magnitud del daño que puede causar esta enfermedad depende de la cantidad de humedad y el buen drenaje del suelo. Suelos con alta cantidad de arcilla, que



Sherrie Smith
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se irrigan constantemente y con poco drenaje favorecen la severidad de esta enfermedad. Para el control químico de este patógeno se recomienda el uso de Mefenoxam, el cual es muy efectivo pero se recomienda tener precaución en manejo, ya que el mal uso de este puede generar cepa resistentes de este patógeno.

Asparagus Spear Rot- *Phytophthora megasperma*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Asparagus Spear Rot- *Phytophthora megasperma*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Camellia

Camellias are lovely shrubs grown for their lustrous evergreen foliage and beautiful flowers. They do best in neutral to acidic soils in light shade, blooming from late fall to spring, depending on species. Camellias grow very slowly. Although an old camellia may reach 25 feet high or more, most are considered mature at 10 foot high. They require well-drained soil rich in organic matter. They are not very drought tolerant. Care should be taken to ensure enough water throughout the year, including winter months when rainfall is less than one inch a week. Camellias do best when



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sheltered from full sun and drying winds. Leaves often will get sunburned when planted in full sun, or against a west or south facing wall. They are reliably winter hardy only in zones 7-10. A widespread problem on camellia is scale. Several species of scale insects attack camellia. The most common is Tea Scale, *Fiorinia theae*. The introduction of ornamental camellias from Asia into the United States is thought to be responsible for introducing the pest. It also attacks tea, holly, citrus, dogwood, bottlebrush, kumquat, mango, and olive. Symptoms include yellowing of the upper leaf surface, leaf drop, twig dieback, and occasionally death. Hand picking infected leaves is effective if there are only a few leaves involved. The best time to spray is in the spring after blooming with fine horticultural oil. Spray two applications, 10 days apart. Insecticidal soaps will also kill scale but both soaps and oil are difficult to get beneath the leaves where the scale are feeding. Insecticides such as Malathion and seven will kill crawlers but have the disadvantage of killing beneficial insects as well. Systemic insecticides such as Bio Advanced Insect Control for Trees and Shrubs is highly effective. Healthy plants attract fewer insects, so the key is to make sure your camellias are planted in the right location with adequate water and nutrients.

Camellia Tea Scale-*Fiorinia theae*



Photo by Russell Parker, University of Arkansas Cooperative Extension



Camellia Tea Scale-*Fiorinia theae*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Camellia Rust Mite

The Purple or Ribbed Tea mite, *Calacarus carinatus*, is an Eriophyid mite. The adult female is purple with white longitudinal stripes. These extremely tiny mites are known as rust mites because of the bronzing that occurs on infested leaves due to their feeding activity. Leaf curl and bud blight can also occur. Another sign of rust mite infestation is the dusty appearance caused by their white cast-off skins. These are easier to see than the mites themselves. Ribbed tea mites can be serious pests of Camellia, especially during cooler temperatures in the spring. Their eggs are minute, circular,

flattened, and colorless. Eggs are laid mostly along veins. Life cycle depends on temperature but is approximately 10-12 days. Numbers decline during rainy periods. Multiple applications of miticides such as Avid give control. Homeowners will find insecticidal soaps and fine horticultural oils helpful. Bio Advanced Insect Control for Trees and Shrubs gives good control. Unlike Spider mites Eriophyid mites can also be killed using Sevin.

Camellia Rust Mite-*Calacarus carinatus*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Camellia Rust Mite-*Calacarus carinatus*

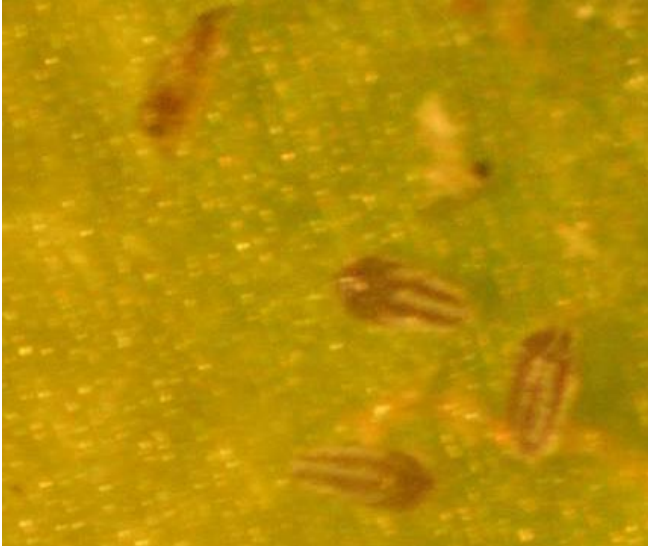


Photo by Sherrie Smith, University of Arkansas Cooperative Extension

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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Camellia Rust Mite shed skins-*Calacarus carinatus*

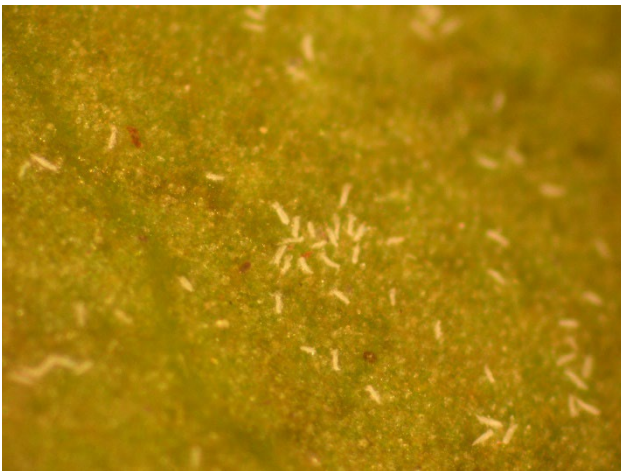


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