

Problems: Phomopsis Canker of Russian Olive - *Phomopsis arnoldiae*



Host Plants: Russian olive.

Description: Russian olive (*Eleagnus angustifolia*) has been widely planted for ornamental, windbreak, and wildlife plantings in Kansas. Although the tree is prized for its silvery color in landscapes, it has become a major weed species in pastureland in eastern Kansas. Russian olive is affected by a disease called Phomopsis canker, caused by the fungus *Phomopsis arnoldiae*. The disease results in branch dieback and ultimately tree death. It has become so severe in eastern Kansas that the species is no longer recommended for landscape plantings.

Trees affected with Phomopsis canker develop distinct lesions or dead areas of bark on branches throughout the tree crown. These lesions, or cankers, as they are called, may vary somewhat in appearance depending on branch size. Cankers on small branches are reddish-brown to black with sunken margins and are easily distinguished from surrounding healthy tissue. Often, small black fruiting structures of the fungus can be seen dotting the diseased bark tissue. Cankers on larger branches are harder to detect. They may also be slightly sunken, but generally are much rougher in texture than small branch cankers. Sapwood beneath the diseased bark is discolored brown or black. Gummosis or bleeding may accompany large cankers.

Girdling cankers restrict water movement and cause rapid wilting of foliage. Leaves on affected branches turn light-tan and become brittle, but usually remained attached to the tree. Cankers normally appear on those branches nearest the ground first, then eventually form on successively higher branches. Multiple branch cankering over a period of several years results in branch dieback and a general tree decline. Eventually, only a few branches remain alive in the tree crown. At this point, the tree either dies or becomes so unsightly that it is removed.

Disease Cycle: The infection process and development of the disease is poorly understood. The fungus survives from year-to-year in branch cankers. Small colorless spores of the fungus are produced in small black fruiting structures in the canker and are released during rain. Apparently infection can occur throughout the growing season. Canker formation is most common in young woody tissue. Infection courts for the fungus probably include wounds and natural openings in the bark.

Recommendations: Phomopsis canker is epidemic throughout much of the eastern half of the state, and the planting of this species for windbreak and ornamental purposes should be severely restricted in this region. The disease is extremely difficult to control. Branches with cankers should be pruned during the winter or dry summer months and destroyed. These branches should be removed from the site to prevent fungal sporulation and reinfection. While sanitation delays disease progression, it rarely completely suppresses disease development. Other techniques that help reduce disease severity include proper irrigation and fertilization and providing good air movement. Phomopsis canker is devastating in closely spaced Russian olive plantings with poor air movement. Autumn olive (*E. umbellata*), commonly used in windbreak plantings, is resistant to Phomopsis canker.

References:

1. [Russian Olive Disorder: Phomopsis Canker](#). University of Wisconsin Extension, A3289

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