

Preferably, diseased trees should be removed to prevent further spread of the bacteria.

- Avoid planting susceptible tree species, especially sycamore, in scorch-prone areas.



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ALABAMA A&M AND AUBURN UNIVERSITIES

Plant Disease Notes

Bacterial Leaf Scorch Of Shade Trees

Bacterial scorch, which is caused by the fastidious bacteria *Xylella fastidiosa*, is known mainly as a disease of landscape and fruit trees. Sycamore is the most common landscape tree host of this bacteria. Other landscape tree hosts include mulberry, red maple, American elm, and a number of oaks such as the pin, scarlet, southern red, laurel, water, and shingle oak. Other diseases caused by *X. fastidiosa*, all of which are found in Alabama, are Pierce's disease of grape, plum leaf scald, and phony disease of peach. Outbreaks of bacterial scorch in landscape and fruit trees occur primarily in the southern half of the state.

Symptoms. Typically, scorch first appears in mid-summer as yellowing and then browning of the edge of all the leaves on one shoot in one area of the upper canopy of a tree. On sycamore leaves, the areas between the larger veins turn brown but veins themselves remain green. Scorched sycamore leaves often curl upward from the edge. On oak and sycamore, the leaves stay on the tree until fall. The development of scorch symptoms on the leaves is often intensified by drought. Over a period of several years, symptoms gradually develop on other branches of a diseased tree. Growth of leaf scorch-damaged trees

slows and diseased limbs start to dieback. The decline of diseased sycamore is particularly rapid.

Persistence And Transmission.

Leaf scorch bacteria are transmitted by grafting as well as xylem-feeding leaf hoppers and spittle bugs. Root grafts are another means of tree to tree spread. This bacteria resides in the xylem or water-conducting tissues of the tree. In diseased trees, disruption or slowing of water transport up to the foliage along with bacterial toxins cause the scorching of the leaves, decline in vigor, and eventual tree death.

Control. Control of the insect vectors of the scorch bacteria with insecticides is ineffective in slowing disease spread. Bacterial leaf scorch is best controlled by using the following strategies:

- Pruning scorched shoots shortly after symptoms are seen may stop further spread of the bacteria.
- Injecting bactericides into the trunk of lightly damaged but valuable specimen trees will suppress symptoms but will not eradicate the bacteria in the xylem. Once the annual treatments are stopped, disease development will continue.
- Fertilizing and irrigating may prolong the life of diseased trees.



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