



Extension

UNIVERSITY OF WISCONSIN-MADISON

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Ash Yellows

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What is ash yellows? Ash yellows is a chronic, systemic disease that affects ash trees of all ages. White ash is particularly susceptible to ash yellows. Ash yellows likely occurs wherever ash is grown and has been reported widely in the United States and southern Canada. The organism that causes ash yellows also causes a disease called lilac witches'-broom.



Brooming symptoms in an ash tree caused by ash yellows.

What does ash yellows look like? Symptoms of ash yellows usually occur within three years of infection. Infected trees typically grow at a much slower rate than non-infected trees, although this may be difficult to detect in a single tree. The rate of growth of an infected tree may be as little as one half that of a healthy tree. Leaves on infected trees are frequently smaller, thinner and lighter green than usual. Often, but not always, affected trees will produce branches in tufts, a symptom that is called "brooming". Eventually, branches in the crown will die and this die-back can continue until the entire crown is dead.

Where does ash yellows come from? Ash yellows is caused by the phytoplasma, *Candidatus Phytoplasma fraxini*. Phytoplasmas are bacteria-like organisms that live and survive in the phloem (i.e., the food-conducting tissue) of infected plants. Leafhoppers are thought to be the primary means by which this pathogen is moved from tree to tree.

How do I save a tree with ash yellows? There is no known cure for ash yellows, but some infected trees may live and grow slowly with the disease for many years. Ash trees suspected of having ash yellows should be tested for the disease, and those trees that test positive should be removed immediately to prevent spread of the ash yellows phytoplasma to other trees in the area. Wood harvested from infected trees does not serve as a source of the phytoplasma and can be used for woodworking or firewood, or chipped for mulch.

How do I avoid problems with ash yellows in the future? Avoid growing ash trees in areas where ash yellows is prevalent. When choosing a lilac, select a variety of common lilac as these varieties appear to have tolerance to the ash yellows phytoplasma. Avoid using *S. josikaea*, *S. reticulata* and *S. sweginzowii*, or hybrids of these species with either *S. komarowii* or *S. villosa*, as these lilacs appear to be highly susceptible. It is unclear if the use of insecticides (or other means) to control leafhoppers can help control the spread of this pathogen.

For more information on ash yellows and ash yellows testing: Contact your county Extension agent.

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A complete inventory of University of Wisconsin Garden Facts is available at the University of Wisconsin-Madison Division of Extension Plant Disease Diagnostics Clinic website: <https://pdcd.wisc.edu>.