Verticillium wilt

Identification

- On maples and other broadleaf trees.
- Branches die.
- Wood has dark green to dark brown streaks or mottled areas.

Control

- Chemical controls are not effective.
- Remove the tree or parts of the tree as they die.
- DO NOT use chips made from branches or trees killed by Verticillium wilt because of the high risk of spreading the fungal pathogen through the chips.
- Plant trees known to be resistant.
- Improve tree health by mulching and watering about 1 inch per week. Avoid overwatering.

Bur oak decline

Identification

- On bur oak.
- In areas that were once native forests but are now parks, residential areas or other developed landscapes or near roads or field edges.
- Branches generally die back from the ends.
- Trees become more susceptible to insects and diseases and may die.

Control

- Improve tree health by mulching with wood or bark chips and watering about 1 inch per week. Avoid overwatering.

Cankers

Identification

- On cottonwood, honeylocust, willow, elm and many other broadleaf trees.
- Dead areas of bark appear, often around pruning cuts or where branches are attached.

Control

- Chemical controls are not effective.
- Improve tree health by mulching and watering.
- Avoid winter pruning or other injuries that weaken the tree or create wounds through which canker fungi can enter.

*** Trade names are examples of available products. No endorsement is implied. Always follow pesticide label instructions.**

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More information: www.nfs.unl.edu

Photo credits: Dutch elm disease #1: Joseph O'Brien, USDA-Forest Service, www.forestryimages.org
Ash rust: Iowa St. Univ. Plant Disease Clinic

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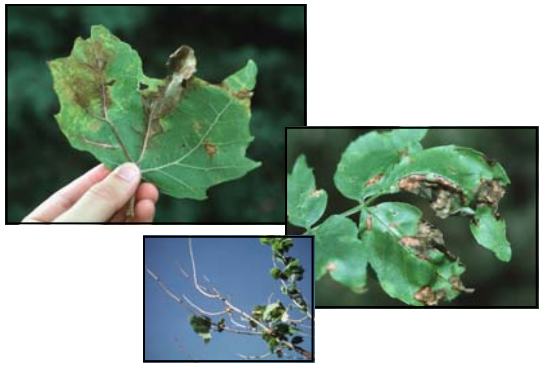
Diseases of Broadleaf Trees

Anthracnose



Identification

- On sycamore, ash, maple, oak and walnut.
- Worse in years with wet springs.
- Leaf spots and blotches appear in the spring (later for walnut), often following leaf veins.
- Leaves drop early.
- Dead shoots may appear on sycamore and oak.

Control

- For ash, maple and walnut, a control is usually not needed. Trees typically recover.
- For sycamore and oak, a control may be desired if shoot death is severe.
- Spray foliage at budbreak with chlorothalonil (Daconil, Fung-onil), thiophanate-methyl (3336, Fungo) or copper fungicide (Camelot, Bordeaux mixture)* and repeat 2-3 times every 7-14 days.
- Improve tree health by mulching and watering about 1 inch per week. Avoid overwatering.

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Apple scab

Identification

- On crabapple and apple.
- Dark spots appear in leaves, often with feathery margins and along leaf veins.
- Leaves turn yellow and drop from the tree.

Control

- Spray with chlorothalonil (Daconil, Fung-onil, Ortho Garden Disease Control), thiophanate-methyl (3336, Fungo), myclobutanil (Immunox, Eagle), mancozeb (Dithane, Fore, Protect), or propiconazole (Banner Maxx, Infuse)* at 7 to 14 -day intervals from prebloom (April) through rainy periods.
- Some chemicals cannot be used on trees grown for fruit production.

Cedar-apple rust

Identification

- On crabapple, apple, juniper and redcedar.
- Orange spots appear on the upper leaf surface.
- Raised spots appear on the lower leaf surface.
- Ball-shaped growths (galls) or orange gelatinous masses appear on juniper and redcedar.

Control

- Spray with chlorothalonil (Daconil, Fung-onil, Ortho Garden Disease Control), thiophanate-methyl (3336, Fungo), myclobutanil (Immunox, Eagle), mancozeb (Dithane, Fore, Protect), or propiconazole (Banner Maxx, Infuse)* as flower buds break, at petal drop and 3 or 4 additional times at 7 to 10-day intervals.
- Some chemicals cannot be used on trees grown for fruit production.

Ash rust

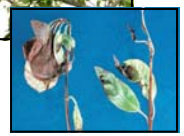
Identification

- On all common ash species
- Swollen areas with many circular orange spots on leaves, petioles and green twigs

Control

- Spray with myclobutanil (Immunox, Eagle) at budbreak and repeat 2 to 3 times at 10 to 14-day intervals.

Fire blight



Identification

- Mostly on apple, crabapple, pear, and mountain-ash.
- Shoots and leaves droop and turn dark.

Control

- Prune out dead branches 8-12 inches down from diseased tissue.
- Sterilize pruning tools after each cut with a 70% alcohol solution.
- Spray with streptomycin (Agri-Mycin)* at pink stage (3 to 4 days before blossoms open—usually mid April) and every 5 to 7 days until petal drop.

Dutch elm disease

Identification

- On American elm.
- Leaves turn yellow, then brown.
- Branches die, then the whole tree dies.
- Brown to black streaks appear in the wood.

Control

- Trunk inject with thiabendazole (Arbotect) or propiconazole (Alamo)* before or as symptoms begin appearing (if 5% or less of the crown is affected).

Oak wilt

Identification

- Mostly on red and bur oak.
- Red oaks often die within 2 to 6 weeks.
- Bur oaks decline and may die, especially if stressed by changes in site conditions.
- Leaves turn brown.
- Branches die, then whole tree dies.
- Brown to black streaks appear in the wood.

Control

- For red oak, trunk inject with propiconazole (Alamo)* as soon as symptoms begin appearing or before.
- For bur oak, improve tree health by mulching with wood or bark chips, watering about 1 inch per week, avoiding overwatering and by trunk injecting with propiconazole (Alamo),* if advised, to quicken the recovery.

Tubakia leaf spot

Identification

- Mostly on bur oak.
- Brown blotches on leaves, often along veins.
- Affected leaves may drop from the tree.
- Young shoots may die.
- Symptoms are more extensive in lower branches than in higher branches.

Control

- Control is rarely needed.
- If needed, spray with mancozeb (Dithane, Fore) or propiconazole (Banner Maxx, Infuse)* at budbreak (April) and repeat 2 times at 10 to 14-day intervals.