

# Reading Leaf Symptoms

Trees can't tell us when they are sick. Instead, we must interpret the signs trees show to determine what and how serious their health problems are.

The leaves usually show the first symptoms of disease, insect, or physical damage. By learning leaf-reading, you can diagnose your tree's condition. Here are some common leaf symptoms and their probable cause.

## 1. Ragged leaves with holes in them.

Suspect insect feeding, especially if it is summer and the leaves were not showing damage earlier. But if it is springtime, and the leaves never developed properly, chances are the damage is due to either low temperatures during the bud stage or being banged around by high winds as small leaves.

## 2. Leaves suddenly turn brown or black.

If a frost occurred a day or two earlier, that's probably the cause. Sudden high temperatures in springtime also cause problems. If no temperature extremes are noted, suspect either a leaf or a stem disease. If the symptoms show up on a branch or two at a time, trunk or branch invasion or injury is probably the cause.

## 3. Spots or bumps on the leaves.

Insects and mites cause most leaf swellings. Leaf spots are usually the result of disease or insect activity. Chemicals, such as sulfur dioxide from nearby coal-burning plants, or improperly applied fertilizer or pesticides, can cause leaf blotches, too.

## 4. Margins of leaves turn brown.

Moisture deficiencies or high temperature stresses are usually to blame. Sometimes root or trunk damage, including injury from road salt, can be involved.

## 5. Sudden leaf drop.

This may or may not be serious. If inner leaves are dropping during a dry spell, or if a few leaves fall from throughout the tree, it shouldn't be serious. Drought or squirrels may be to blame. But if leaves are dropping heavily from one branch and then another, there is a problem somewhere with the water-conducting system of the tree—probably disease, possibly insect borers.

## 6. Light green or yellow leaves.

Probably a "micronutrient" disorder, such as iron or manganese deficiency. Curiously, trees rarely show deficiencies of the major plant nutrients such as nitrogen and potassium.

## 7. Leaves twisted or malformed.

The most common cause for this is stray herbicide drift, but insects, mites, occasionally a disease, and sometimes low temperature injury can all produce similar-appearing symptoms.

## 8. Leaves turn fall-colored prematurely.

A serious symptom suggesting trunk or root damage of some kind.

Trees can withstand a certain amount of abuse to the leaves, but leaf injury becomes serious when: heavy losses occur two or more years in a row, early season loss causes a new flush of leaves, the tree is marginally hardy to the area, or the tree is under some form of stress, such as recent transplanting. Your county extension agent has a number of publications to help in diagnosis and treatment of tree problems, or you may need to call an arborist who is competent in tree health diagnosis.

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