

## Common Diseases of Apple Trees

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**ABSTRACT:** The article provides information about the main diseases of apples and their types. Apple scab is a disease that affects apple trees and is one of the most frequent and dangerous. It normally occurs in early to mid-spring, and it is more common when it rains. Apple scab is entirely resistant to some apple types, including Jonafree, Liberty, Enterprise, Pristine, and Williams Pride. Choose apple cultivars that are resistant to scab, especially if apple scab is a common problem in your area. Avoid the disease-prone varieties Red Delicious, Cortland, McIntosh, and Rome Beauty. Fire blight is a bacterial disease that is difficult to manage in many places in the United States. Water-stained brown blooms and brown foliage are common on trees affected by fire blight.

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### INTRODUCTION

Apples are susceptible to a number of illnesses that can result in minor aesthetic harm as well as more serious consequences such as reduced yields and tree mortality. Fortunately, disease-resistant types may be planted by home growers to prevent most infections. A handful of the most prevalent apple diseases are listed here. Apple scab is a disease that affects apple trees and is one of the most frequent and dangerous. It normally occurs in early to mid-spring, and it is more common when it rains. The fungus (*Venturia inaequalis*) causes the illness, which overwinters in diseased leaves left on the ground. During damp conditions in the spring, the fungal spores are released and driven by the wind onto fragile, freshly sprouting leaves.

Small, olive-colored sores on the undersides of the leaves are the earliest signs of apple scab. As the fungus spreads, lesions appear on the upper surfaces of the leaves, which may be black or mottled with definite margins. By mid-summer, severely affected trees may have lost their leaves, putting them prone to other diseases. Scabs or soft spots appear on the fruit, which is black or brown in color. The scabs may seem hardened and cracked, but they normally do not impair the fruit's insides. Apple scab is entirely resistant to some apple types, including Jonafree, Liberty, Enterprise, Pristine, and Williams Pride. Choose apple cultivars that are resistant to scab, especially if apple scab is a common problem in your area. Avoid the disease-prone varieties Red Delicious, Cortland, McIntosh, and Rome Beauty. In the fall, brush up and remove leaves and debris, then treat sensitive trees with fungicides such as lime sulfur, sulfur, or Captan in the early spring.

Fire blight is a bacterial disease that is difficult to manage in many places of the United States. Water-stained brown blooms and brown foliage are common on trees affected by fire blight. The tree's twigs and branches may become brown or black, with open cankers oozing a thick, dark substance. The twigs may also be shaped like a shepherd's crook at the tips. The disease survives in the winter in infected wood and is spread by rain and insects in the spring.

Avoid vulnerable types including Beacon, Granny Smith, Jonathan, Gala, and Fuji, and plant resistant cultivars like Jonafree, Liberty, Pristine, and Williams Pride. Fertilize the tree in the early spring before it begins to develop, and avoid using too much fertilizer, as this will stimulate quick, luxuriant growth, which is more vulnerable to infection. Remove diseased branches while the tree is dormant in late winter. The disease will most likely spread if the tree is pruned while it is still developing. If possible, burn the branches to destroy any germs that may have survived the winter. Do not allow them to remain on your premises.

Cork patch looks like hail or insect damage, but it's actually caused by a low soil pH and calcium shortage. On the skin of growing apples, the cork spot emerges as little dimples. The dimples can be as wide as 12 inches and might seem corky or soft. Although the fruit is edible, the spots detract from its visual attractiveness.

If the pH of your soil goes below 6.0, add lime to the soil according to the recommendations of a soil test report. Using 1.5 teaspoons of calcium chloride per gallon of water per tree, spray the trees with calcium chloride. Apply four times, starting after the flowers have fully bloomed. To help control cork spot, reapply the remedy every ten days.



1. **Picture** (*phytophthora rot*).

Powdery mildew is caused by the fungus *Podosphaera leucotricha* and appears on the undersides of leaves as white, felt-like growths. Wilted leaves, reduced development, and black pinpoint flecks on the leaves and twigs appear as the illness advances. Granny Smith, Jonathan, Rome, and Cortland are among the sensitive kinds to avoid. Plant the trees in full sun with plenty of space between them to allow for adequate air circulation. Early in the spring, spray the trees with Myclobutanil, lime sulfur, or sulfur.

Rust is a fascinating disease since it needs a host plant to grow, such as cedar, quince, or hawthorn. On the host plant, the fungus grows in huge galls or growths. The galls dry off in the spring, releasing the spores into the air, which are transferred to apple trees. Rust generates leaf patches that are yellow or orange, as well as deformed or mottled fruit.

Grow resistant apple types and remove any neighboring host plants to control rust. However, because the spores may travel up to two miles, any nearby plants could infect your trees. Apply sulfur, Myclobutanil, or lime sulfur on apple trees. Frog and black rot Eye leaf spot refer to the same illness at various stages of its progression. *Botryosphaeria obtusa* causes the illness, which starts as brown patches on the fruit's ends. The dots grow larger and larger in concentric rings, finally becoming black and spoiling the fruit. Small brown patches or holes may appear on the leaves. The illness then spreads to the tree's limbs, creating cankers that finally destroy the tree.

To fight this disease, trim out any contaminated tree materials and burn or dispose of them as soon as possible. Trees that have been afflicted with fire blight may become weaker, rendering them more vulnerable to Black Rot. While the illness is still in its early stages, spray the trees with Captan or sulfur.

Because the fungus that causes it, *Phytophthora*, thrives in moist, heavy soils, this illness is sometimes mistaken for winter damage or harm from wet soils. Trees affected by this disease lose their energy and development, and their leaves may turn golden purple in the fall.

Fungicides are rarely successful in treating the disease and are not advised for amateur growers. Plant apple trees instead of in loamy, light soils enriched with compost. If your soil is thick or poorly draining, consider berms or raised beds.

## LITERATURE

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