



Peach Fruit Diseases

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IMPORTANCE

Peach fruit diseases can cause significant losses in yield and quality in commercial and home orchards. Often these diseases go unnoticed until late in the season or at harvest. Although there are no curative treatments for infected fruit, many diseases can be prevented using cultural practices and (optional) fungicides. Accurate diagnosis, however, is critical to determine the best management practices and to prevent future losses.

Many of the fruit diseases that occur on peach also develop on other stone fruit, including nectarine, plum, and cherry. Brown rot is the most devastating stone fruit disease, causing significant crop losses each year. Anthracnose, bacterial spot, and scab occur less frequently and are generally less damaging.

Following is an overview of the most common fruit diseases that occur on stone fruit in Kentucky.

SYMPTOMS & SIGNS

Anthracnose (*Colletotrichum* spp.)

Initially, small white or yellow spots develop on fruit surfaces. Spots gradually enlarge to 1 to 2 inches in diameter and become circular, sunken, and tan (FIGURE 1). Infected fruit remain firm. Fungal structures (acervuli) develop within lesions in a concentric, circular pattern (FIGURE 2). During wet or humid conditions, orange or salmon-colored spores (conidia) ooze from acervuli, giving decayed areas a slimy appearance. As disease progresses, infected fruit take on a grayish-black color. Disease can develop in storage if infection occurs before harvest.



FIGURE 1. ANTHRACNOSE FRUIT ROT LESIONS ARE CIRCULAR, SUNKEN, AND TAN. **FIGURE 2.** SIGNS OF THIS DISEASE INCLUDE FUNGAL FRUITING BODIES IN CONCENTRIC CIRCLES EXUDING SPORE MASSES.

Bacterial Spot (*Xanthomonas campestris* pv *pruni*)

Early symptoms are evident as small, water-soaked, brown-to-black lesions with yellow halos (FIGURE 3). As fruit enlarge, spots become pitted, increasingly sunken, and crack; gummy sap may exude from lesions (gummosis). Lesions are limited to fruit surfaces and do not affect flesh; however, resulting cracks may allow entry for other fungal pathogens (e.g. the brown rot fungus). Leaf spots and twig and branch cankers may also develop.

FIGURE 1. BACTERIAL SPOT CAUSES SMALL, WATER-SOAKED SPOTS ON FRUIT.



Brown Rot (*Monilinia fructicola*)

Decay begins as small circular brown spots that rapidly expand (FIGURE 4) to a soft, brown decay of entire fruit (FIGURE 5). Under humid conditions, masses of brown or gray spores (conidia) develop in infected areas, often covering large portions of fruit. Diseased fruit become dry and hard (mummify) and either remain attached to trees (FIGURE 6) or drop. Damaged fruit, ripening fruit, and fallen fruit are most susceptible to infection. The brown rot fungus also causes blossom blight and twig blight in spring.



FIGURE 4. BROWN ROT CAUSES SOFT, CIRCULAR LESIONS THAT RAPIDLY EXPAND TO THE ENTIRE FRUIT.

FIGURE 5. AFFECTED FRUIT BECOME COVERED WITH SPORES AND REMAIN ATTACHED TO TREES.

FIGURE 6. AS DISEASE PROGRESSES, FRUIT BECOME DRY, HARD MUMMIES.



FIGURE 7. PEACH SCAB RESULTS IN SMALL, CIRCULAR, VELVETY SPOTS ON FRUIT SKIN.

Scab (*Cladosporium carpophilum*)
Initially, very small, circular, green-to-black velvety spots form on young fruit, usually near the stem end (FIGURE 7). Spots become darker, expand to 1/4 inch diameter, and may crack (FIGURE 8). Lesions may merge together if disease is severe, and fruit may drop in extreme cases. A corky layer underneath the skin develops but does not expand into the flesh. Twigs and leaves may also become infected.



FIGURE 8. LESIONS MAY CRACK AND MERGE TOGETHER.

TABLE 1. COMPARISON OF THE CHARACTERISTICS OF THE COMMON PEACH FRUIT DISEASES IN KENTUCKY.

Disease	Hosts	Distinguishing Symptoms & Signs on Fruit	Fruit Infections (Temperatures & Susceptible Stages)
Anthracnose	peach, nectarine, plum, sour cherry	salmon colored spores in concentric circles	75° to 86° F young fruit
Bacterial spot	all stone fruit	tiny water-soaked spots that become pitted and cracked	70° to 85° F after shuck split
Brown rot	all stone fruit	soft rot covered with tan to grey colored fungal growth	68° to 82° F 2 to 3 weeks before harvest
Scab	peach, nectarine, apricot, plum	velvety olive-green spots that eventually crack; usually near stem end	77° to 86° F after shuck split

ADDITIONAL RESOURCES

Disease Management Information

- Commercial Fruit Pest Management Guide (ID-232)
<https://plantpathology.ca.uky.edu/files/id-232.pdf>
- Disease and Insect Control Programs for Homegrown Fruit in Kentucky, Including Organic Alternatives (ID-21)
<http://www.ca.uky.edu/agc/pubs/id/id21/id21.pdf>
- Fruit, Orchard, and Vineyard Sanitation (PPFS-GEN-05)
<https://plantpathology.ca.uky.edu/files/ppfs-gen-05.pdf>
- Home Fruit Disease Management: Organic and Sustainable Approaches to Small Scale and Home Fruit Apple & Pear Production (Video)
https://www.youtube.com/watch?v=_8zuFzyC0V0
- Midwest Tree Fruit Pest Management Handbook (ID-93)
<http://www2.ca.uky.edu/agcomm/pubs/id/id93/id93.htm>
- Prediction Models for Plant Diseases of Fruit in Kentucky Counties (PPFS-FR-T-07)
<https://plantpathology.ca.uky.edu/files/ppfs-fr-t-07.pdf>

Disease Information

- Brown Rot of Peach and Other Stone Fruits (PPFS-FR-T-27)
<https://plantpathology.ca.uky.edu/files/ppfs-fr-t-27.pdf>
- IPM Scouting Guide for Common Problems of Peach in Kentucky (ID-260)
<http://www2.ca.uky.edu/agcomm/pubs/id/id260/id260.pdf>
- Scouting Guide for Problems of Peach (Peach Scout) (for mobile devices)
<https://peachscout.ca.uky.edu>

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