

Peach Diseases

Peach Leaf Rust

Organism: Fungus—*Tranzschelia discolor*

Recognition: **Twig cankers** (not common in FL) on the upper reddish side of twigs look like blisters running lengthwise along bark that swell and rupture. Rusty brown, powdery masses of spores erupt from the cankers a few days after the lesions emerge. **Leaf lesions** are pale yellowish-green spots on upper and lower leaf surfaces that become bright yellow, angular spots from the top and blisters with rusty spores on the bottom. Leaf cankers turn necrotic, causing leaf drop and early bloom in winter. Affected leaves remaining on the tree contain overwintering structures that allow infection in the spring. Fruit lesions are not often seen in FL.

Contributing Factors: Late summer/fall, wet weather, prolonged leaf wetness. Spores spread by airborne spores which require moisture for infection.

Management: Sanitation, scouting for disease, and fungicide applications in the spring are used to control. Need to keep leaves on as long as possible for growth and to develop fruit buds for next season. Fungicides with efficacy include: Sulfur (not in high temperatures), Abound; Adament (triflox and tec); Bravo and Captan; and DMIs such as Elite, Indar, Orbit, and Rally. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



Photo Credit: M. Olmstead

Peach Scab

Organism: Fungus—*Cladosporium carpophilum*

Recognition: Spots on fruit, twigs, and leaves. Spores overwinter in raised lesions on shoots and bark. Young, green shoot infection begins with small, slightly raised, reddish-grey lesions which expand and develop dark brown borders. Leaf lesions appear on the underside of leaves as angular or circular pale green areas that turn olive to dark green as they sporulate. Sunken fruit lesions may begin on young, green fruit, and grow to become large, dark lesions that are circular and well defined, sometimes with a yellowish halo. The corky cell layer beneath the fruit lesions does not expand, causing cracks in the skin, usually in the stem end, which allows other fruit rot and fruit flies.

Contributing Factors: Periods of humid weather and rain. Rain splashes the spores.

Management: Important to control shortly after fruit set and into early part of fruit growth. From petal fall use Abound, Pristine, Adament; topsin M; Captan, Bravo. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



Leaf Curl

Organism: Fungus—*Taphrina deformans*

Recognition: Occurs sporadically and can affect blossoms, fruit, leaves, and shoots. Fruit lesions reduce marketable yield. First appears in spring as reddish areas on developing leaves that become distorted. Affected leaves may fall off and be replaced by a second set of leaves unless wet weather continues. Defoliation reduces tree growth and production, and may expose branches to sunburn injury. Fruit infection with reddish, wrinkled and distorted areas on the fruit surface are rare.

Contributing Factors: Periods of cool, wet weather when leaves are first opening. Development of the disease stops when tissue is mature or when weather turns dry and warmer.

Management: Alleviate stress on the tree with good irrigation during the dry season, appropriate levels of N at appropriate times, thin cropload, cultivar resistance. Fungicide applications can control it where it occurs regularly. Apply leaf curl fungicides prior to bud swell for optimal control. Two dormant applications of Ferbam give good control. Ziram, Thiram, Chlorothalonil, and copper may also give control. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



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Bacterial Spot

Organism: Bacteria—*Xanthomonas arboricola*pv. *pruni*

Recognition: Yellow, chlorotic leaves with lesions often clustered at the tip where water collects from rain and dew. “Bacterial shot hole” not to be confused with *Coryneum* shot hole disease. May cause early defoliation and early bloom, reducing following year yield. Fruit symptoms include pitting, cracking, gumming, and watersoaked tissue, making the fruit more susceptible to other fungal infections.

Contributing Factors: Hot, dewy, wet conditions, and windy, sandy sites. Abrasions and nicks caused by blowing sand allow spread and entry of the bacteria. Spraying wet foliage may help to spread the bacteria as well.

Management: Use resistant varieties. Most resistant to least resistant UF cultivars: UFO, UFBlaze, UFBeauty, Gulfking, Gulfcrimson, Gulfcrest, Flordacrest, Flordaking, UFSharp, UF2000, Gulfprince, Flordabest, Whiterobin, Flordaglo, UFSun, Tropicbeauty, Flordaprince. Dormant copper sprays may be used. Reduce copper rates after dormancy to avoid toxicity. At shuck split oxytetracycline, found in Mycoshield and Fireline, may be used. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



Brown Rot

Organism: Fungus—*Monilinia fruticola*

Recognition: Not as large a problem in Florida due to early harvest. Infected new shoots and flowers develop sunken, brown, elliptical cankers that may become gummy and produce gray to tan fungal spore masses. On fruit, small circular spots enlarge and develop rapidly, sometimes in as little as two days lesions may cover the fruit. Tan to gray spore masses will appear and the fruit will shrivel to brown or black mummies that may fall to the ground or remain on the tree. These mummies are the major source of inoculum in the spring.

Contributing Factors: Thrives in moderate temperatures (55^o to 77^o) and wet conditions during fruit development.

Management: Multiple fungicide applications from 21 days pre harvest through harvest. Fungicides to use include Abound, Adament, Pristine; Scholar; Indar, Orbit, Elite, Quash; Captan; Topsin M. Removal of mummy fruit is required for control. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



Photo credits: Clemson University—USDA Cooperative Slide Series, Bugwood.org

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Mushroom Root Rot

Organism: Fungus—*Armillaria tabescens*, *Ganoderma lucidum* or *Armillaria mellea*

Recognition: Attacks a wide range of trees. First symptoms range from a slow, gradual decline to rapid death. Slow death of the tree above ground is most common. White to yellowish, fan-shaped mycelial mats may be found between the bark and wood leading to clusters of mushrooms at the trunk base and roots.

Contributing Factors: Avoid planting peach orchards where forest or oak woodland has recently been cleared or where there is a history of root rot.

Management: There is no cure for this disease. Remove and destroy the affected tree.



Phony Peach Disease (PPD)

Organism: Bacteria—*Xylella fastidiosa*

Recognition: Canopy of tree is flattened, compact and umbrella-like from shortened internodes. Production reduced 80-90% with smaller fruit. Trees that develop PPD symptoms before bearing age never become productive. PPD does not kill the tree, but may make it more susceptible to other diseases and pests. Symptoms can develop as late as 18 months or more after initial infection.

Contributing Factors: Can be transmitted by grafting. Spread primarily by sharpshooter leafhoppers that can be found in association with weeds, shrubs, and trees that serve as reservoirs for the bacteria.

Management: There is no cure for any disease caused by *X. fastidiosa*. Remove trees once PPD is confirmed. Manage weeds. Replanting in a PPD orchard is not likely to be successful.



Peach Tree Short Life

Organism: Complex of problems—cold damage and *Pseudomonas syringae*. Ring nematode may play a role.

Recognition: Growth is delayed in spring, and shoot collapse is often seen. Sprouts from rootstock may be seen as the top dies and the roots remain alive.

Contributing Factors: Largely a stress-related disease.

Management: Avoid deep cultivation that disturbs feeder roots. Avoid winter pruning where possible. Prune after February 1 and stop summer pruning by September 15. Before planting: lime to pH 6.0-6.5 in the top 16 inches of soil, subsoil, fumigate when nematode samples indicate the need, use an appropriate nematode free planting stock. Destroy all dead and dying trees.



Fungal Gummosis

Organism: Fungus—*Botryosphaeria dothidea*

Recognition: Raised blisters at infected lenticels lead to necrotic cankers that ooze amber colored sap in the second year. Large cankers will coalesce, killing branches or the entire tree. Blossoms, leaves, and fruit are typically not infected.

Contributing Factors: Flordaguard rootstock is highly susceptible. Chemical, physical, or abiotic damage to the trunk, including larval feeding of both types of peach tree borer. Water stressed or poorly managed orchards are at greater risk. Consistent moist conditions around trunk from poor weed control increase fungal growth.

Management: Fungicide applications (Captan) to trunk of 1-3 yr old trees may help to control. Reduce stress and practice sanitation by removing and destroying diseased wood. Avoid pruning immediately before or after a rain or irrigation event when leaves are wet. Avoid pruning water- and nutrient- stressed trees. Prunes trees with gummosis last. Clean pruning tools after pruning an infected tree with mild bleach, rubbing alcohol, or quaternary ammonium solution to sanitize tools. Prevent wetting the trunk during irrigation. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



Photo credit: L. Pusey, USDA-ARS



Photo credit: Rebekah D. Wallace, University of Georgia, Bugwood.org

Shot Hole Blight or Coryneum Blight

Organism: Fungus—*Wilsonomyces carpophilus*, also known as *Stigminta carpophila*, *Coryneum beijerinckii*.

Recognition: Round purple to tan lesions develop on the leaves and then drop out as the leaf expands. Cankers form on infected buds that may expand to girdle and kill the twig. Infected buds may also be darker colored and exude gum. Fruit infections appear as small purple spots that become grayish lesions, often with drops of exuded gum.

Contributing Factors: Cool, continuously moist conditions favor disease development from overwintering fungal infections on dormant buds.

Management: Pruning out infected tissues and applications of chemicals are effective. Formulations of copper can be used in organically certified orchards. Chemical Control: pyraclostrobin, chlorothalonil, and azoxystrobin. Chemicals used for peach rust such as Abound, Bravo, Captan, Orius, Quash, Indar, Orbit, Top-guard and other DMIs could also help to control this disease. See [Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide](#) for the latest recommendations.



Infected bud. Photo: Utah State University



Infected bud causing girdling of twig. Photo: Utah State University

Photo credit: Robin Harris



Infected fruit. Photo: Utah State University

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