Bacterial Spot of Peach

*Xanthomonas campestris*

**Introduction:** "Bacterial spot" sometimes known as "bacterial shot hole" is a commonly encountered disease, especially on older peach trees. This disease may also be found on susceptible varieties of apricot and plum but is more frequently seen on peach and nectarine. Bacterial spot is caused by the bacterium *Xanthomonas campestris* pv. *pruni*. The disease occurs most often on Long Island, but has been occasionally reported in the Hudson valley and Western New York.

**Symptoms:** The disease can affect foliage, tender twigs, and fruit. The earliest evidence of bacterial leaf spot is the presence of water soaked spots on leaves. The spots are generally concentrated near the tips of the foliage but may also run along the mid-vein or edge of the leaf. As the spots enlarge, they darken, becoming purple and eventually necrotic (Fig. 1). Spots may abscise and drop out, leaving shot-holes in affected leaves. Severely infected leaves may turn yellow and fall to the ground. On sensitive varieties, this may lead to severe defoliation. Heavy defoliation early in the summer can reduce the size of the fruit and weaken the tree.

Leafspots similar to bacterial spot can be caused by a variety of other factors, including X-disease, "Shot Hole" caused by the fungus *Wilsonomyces carpophilus*, water stress, nitrogen deficiency, and spray injury from chemicals (such as captan). Bacterial spot can usually be distinguished from the others by the angular nature of the lesions and by the fruit symptoms.

Fruit symptoms initially appear as small circular brown spots on the surface of the fruit (Fig. 2). Later pitting and cracking may occur around the spots. Although this symptom damages the appearance of the fruit, it does not destroy the fruit's edibility. However, the resultant cracking may provide suitable sites for ingress of decay fungi. Late season infections are superficial and give the fruit a mottled appearance.

Infections of twigs produce cankers from spring to fall. At first the cankers are purplish water-soaked spots, but later become more or less circular to elliptical in shape and sunken. Cankers allow the bacterium to overwinter. On plum and apricot, bacteria may survive in cankers for...
Disease Cycle: The conditions which favor disease development include warm, moderate temperatures, frequent light rains, heavy dew, and considerable winds. If all, or most, of these conditions prevail, severe infection can be expected. When weather favors it, infection by these bacteria may occur anytime from shuck split until post-harvest. Hard, driving rains are more important in starting new infections, thus the disease can be proportionally more severe on one side of the tree than the other.

Management Strategies: Some peach varieties are more susceptible than others but virtually all commercially grown peach varieties can be infected.

- Some of the most susceptible peach varieties include: Autumnglo, Autumn Lady, Blake, Elberta, Halehaven, July Elberta, Jersey Queen, Jerseyland, Kalhaven, Suncling, Suncrest, Sunhigh, Ran Cosmos, Redcrest, Rio-Oso-Gem, and Sweet Sue.

- Peach varieties with the highest resistance should be grown. These include Belle of Georgia, Biscoe, Candor, Comanche, Dixired, Earliglo, Early-Free Red, Emery, Encore, Garnet Beauty, Harbelle, Harbinger, Harbrite, Harken, Late Sunhaven, Loring, Madison, Norman, Ranger, Redhaven, Redkist, Redskin, Sentinel, and Sunhaven. Many other peach varieties exist and new ones are being developed, so check with your local nursery supplier for information on additional varieties that show resistance to bacterial spot of peach.

- Most apricot varieties are susceptible (Goldcot, SH-50, & SH-7) and many nectarine varieties are also susceptible. Again, check with your local supplier for varieties that may show resistance.

Vigorously growing peach trees are less susceptible to infection than weak ones. Good tree vigor should be maintained by proper pruning, judicious application of fertilizer, and watering when necessary. Excess nitrogen may aggravate the disease.

Planting susceptible trees in close proximity to one another can contribute to the buildup of the disease. This disease usually is not devastating in the home orchard and is usually more of a problem in warmer, downstate locations and/or in wet years.

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