

Bacterial Spot of Peach: *Xanthomonas campestris* pv. *pruni*

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 in 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 and Signs

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. 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.

Leaf spots similar to bacterial spots 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 spots 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. 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 more than one season.

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 varieties include: 'Autumnnglo', 'Autumn Lady', 'Blake', 'Elberta', 'Halehaven', 'July Elberta', 'Oso-Gem', and 'Sweet Sue'. 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', & 'SH7'), 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 more of a problem in warmer, downstate locations and/or in wet years. In the home orchard, some registered products may be labeled for managing the disease or simply for suppression. For a list of specific products, please refer to the newest version of our fruit fungicide table. Please note that some restrictions or warnings may apply to products that may be registered for either commercial or home garden use.

Be certain any formulation(s) of pesticide(s) you purchase are registered for the intended use. Follow the label instructions for all pesticides used and avoid the use of insecticides during bloom so that bees are not harmed. For commercial applications, please refer to the appropriate commercial pest management guidelines, or contact your local Cooperative Extension Office for more information on current registered products.

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READ THE LABEL BEFORE APPLYING ANY PESTICIDE! Changes in pesticide regulations occur constantly. All pesticides distributed, sold, and/or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office.

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