

Problem: Peach Leaf Curl and Plum Pocket - *Taphrina deformans*



Host Plants: Peach and Plum

Description: Peach leaf curl is one of the most common diseases of peach in the state. Symptoms first appear in early spring on expanding foliage. Young, infected leaves become thickened and distorted along the midrib and take on a red to purplish hue. Later, as the fungus begins to produce spores, the leaf surface appears silvery or gray. Diseased leaves eventually die and fall off the tree. These leaves are replaced by a second growth of foliage, which rarely is infected by the fungus.

Blossoms, young fruit, and succulent shoots also may be infected. Because infected blossoms and fruit crop rapidly, symptoms on these parts may be more difficult to observe. Extensive defoliation can lead to a reduced fruit crop the following year. In addition, defoliation weakens trees and predisposes them to other diseases and to winter injury.

In contrast to peach leaf curl, symptoms of plum pocket are most conspicuous on the fruit. Small, whitish spots develop on young plums soon after blossom. The spots enlarge and eventually cover the entire fruit. Seed fails to form in infected plums; the fruit becomes hollow and enlarges to many times normal size. At this stage, the distorted plums have a red to grayish tint. Young shoots and leaves may be deformed and killed by the disease, but these symptoms are not as common as in peach leaf curl.

Peach leaf curl is caused by the fungus *Taphrina deformans*. Both peaches and nectarines are susceptible to this disease; apricots are not affected. Plum pocket, caused by the fungus *Taphrina communis*, affects all native plum species. Commercial varieties of plums, introduced from Europe or Asia, are not susceptible to plum pocket caused by *T. communis*.

Disease development is similar for both peach leaf curl and plum pocket. The fungus overwinters as dormant spores in bud scales and bark crevices. During cool, wet periods in early spring, these spores germinate and infect expanding leaves and young fruit. Later, the fungus produces great numbers of new spores which are splashed or blown from tree to tree. These spores then remain dormant until the following spring and do not infect mature leaves or fruit. Thus, disease development is limited to a short period in the spring.

Recommendations: Peach leaf curl and plum pocket can be controlled effectively with a single application of an appropriate fungicide. The timing of the fungicide spray is extremely important. The fungicide should be applied as a dormant spray, either in the fall after most of the leaves have dropped or in late winter before buds begin to swell. Use a copper fungicide or chlorothalonil to control this disease. Examples of copper fungicides include Bonide Copper Fungicide and Monterey Liqui-Cop. Chlorothalonil is found in GardenTech Daconil, Ortho Garden Disease Control, Bonide Fung-Onil, Fertilome Broad Spectrum Landscape & Garden Fungicide.

Commercial apple growers or other large-scale growers should consult the current Midwest Fruit Pest Management Guide at the following website:

<https://store.extension.iastate.edu/product/14488>

These diseases cannot be controlled once the buds start to break.

If a dormant spray has been neglected, and disease develops on peaches or plums, maintain tree vigor. Fruits should be thinned heavily to reduce the nutrient drain on the already weakened tree. Trees should be fertilized in the spring to promote new leaf growth and watered frequently throughout the growing season. Do not over-fertilize or fertilize late in the season. This will stimulate succulent growth, which is very susceptible to winter injury.

References:

1. [Peach Leaf Curl](#), Purdue University, Plant Pathology, BP-54

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