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Peachleaf Curl

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Recognized as a common problem in peach production since 1821, peachleaf curl is one of the most common and widespread diseases affecting peach plantings in the United States.

In Idaho, peachleaf curl is most prevalent in home-orchard plantings although it causes frequent and serious damage to commercial orchards. This is particularly true in the state's northern portion.

Cause of the Disease

Cause of peachleaf curl is the fungus *Taphrina deformans*. In early summer, the fungus produces spores on surfaces of infected leaves. These spores give the leaf a powdery appearance. Millions of the spores are blown and splashed about by wind and rains and eventually come to rest in bud scales and rough bark of the trees. Here they remain in the summer and winter months. When the young peach buds begin to swell in spring, the spores germinate and the fungus penetrates the developing young leaves. Infection follows.

Symptoms of the Disease

Peachleaf curl appears first in early spring. Leaves are noticeably red and become distorted, thickened and curled as they develop.

When diseased leaves are fully developed, they are lighter colored than normal. Frequently, they are flushed with red and are extremely curled, puckered and distorted.

Diseased leaves are thicker than normal leaves and have a firm, leathery consistency. The entire leaf or any portion of it may become infected. As the growing season advances, the upper surfaces of diseased leaves turn gray and develop

a powdery appearance. Dry weather soon withers infected leaves and they fall early. A few or nearly all of the leaves on a tree may fall, depending upon the severity of the attack. Cool weather delays this defoliation.

Peach blossoms also may become infected, but they fall from the tree early and usually pass unnoticed.

The fungus may attack young terminal twigs. When this occurs, the end of the twig may be enlarged. From 4 to 5 inches of the infected twigs become swollen and show a pale yellow or green color. The twigs generally produce nothing but curled leaves at their tips. The majority of them die back.

Peach fruits are attacked more often than is generally recognized. Young peach fruits, when affected by the fungus, become distorted and seldom remain long on the tree. Infected fruits show irregular, swollen and colored areas on their surfaces. These areas usually are without the normal peach fuzz and look as though they have been polished.

A severe infection of peachleaf curl can destroy many of the blossoms and much of the young fruit.

Effects of the Disease

Attacks by the peachleaf curl fungus may cause foliage to drop in early summer. This stimulates the infected tree to produce another crop of leaves, with resulting decreased vigor in the tree. In turn, this lowered tree vigor increases the tree's susceptibility to winter injury.

Blossoms and young fruits may drop prematurely as a result of defoliation. Attacks on terminal buds of young twigs may cause their death. Severe attacks by the fungus may hinder formation of fruit buds and thereby endanger the next year's bud crop. If defoliation from peachleaf curl occurs year after year, the infected tree eventually dies.

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Prevention of the Disease

Two applications of a suitable spray material applied at the most advantageous time will prevent peachleaf curl. The first application — made at or just before leaf fall — gives

excellent control in most instances. If the disease has been a perennial problem, spray one additional time before the buds begin to swell in spring. Chemical materials satisfactory for control of the disease are listed below.

PEACHLEAF CURL CONTROL

Material	Rate per 100 gallons water	Rate per gallon water
* Bordeaux (copper sulfate + lime)	12-12-100 8-8-100 for post-harvest	Follow manufacturer's directions
** Lime sulfur	11 gal.	1 2/3 cups
*** Fixed copper 53% (plus sticker)	5 lb. 4 lb. for post-harvest	3 1/4 tsp. 3 tsp. for post-harvest
Ferbam 76% W. P.	2 lb.	4 tsp.
Maneb 80% W. P.	3 lb. 2 1/2 lb. for post-harvest	6 tsp. 5 tsp. for post-harvest
Ziram 76% W. P.	2 lb.	4 tsp.

* Bordeaux 12-12-100 means a Bordeaux mixture of 12 lb. of copper sulfate plus 12 lb. of lime in 100 gal. of spray. Bordeaux 8-8-100 means 8 lb. of copper sulfate plus 8 lb. of lime in 100 gal. of spray. In any Bordeaux formula, the ingredients are always given in the same order with copper sulfate first, then lime and water.

** Lime sulfur will discolor painted buildings.

*** Fixed copper is manufactured under several trade names. If the copper content of the available material differs from 53% follow manufacturer's recommendations.

PESTICIDE RESIDUES. These recommendations are based on the best information currently available for each chemical listed. If followed carefully, residues should not exceed the tolerance established for any particular chemical. To avoid excessive residues, follow recommendations carefully with respect to dosage levels, number of applications and minimum interval between application and harvest.

Remember: Read the label directions thoroughly before preparing and applying pesticides. Many of the commercially prepared mixtures contain insecticides as well as fungicides.

The grower is responsible for residues on his crops as well as for problems caused by drift from his property to other properties or crops.

The toxicity of pesticides listed here is relatively low. Trade names are used only to identify the chemicals as they are known in the marketplace. No endorsement by the University is intended, nor is discrimination implied against products not listed.

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