

MULTNOMAH COUNTY

EXTENSION OFFICE

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Control of

FILBERT BLIGHT

in Oregon

Extension Circular 645

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Control of FILBERT BLIGHT in Oregon

Bacterial blight, commonly known as filbert blight, is the most important parasitic disease of the filbert in Oregon. Its prevalence and destructiveness vary with the season. The disease is usually very prevalent after heavy fall rains. If the fall rains are relatively light, the disease is usually of little consequence.

Cause and Nature of the Disease

Bacterial blight is caused by a bacterial organism, *Xanthomonas corylina*. Buds, leaves, branches, trunk, and occasionally nuts are attacked.

Figure 1. A young filbert tree girdled and killed by bacterial blight.



The most serious phase of filbert blight is trunk girdling and killing of trees up to four years of age (Figure 1). Trunks of older trees are seldom infected, but buds and nut-bearing twigs in the tops often are killed, reducing yield (Figure 2).

The primary source of infection is diseased nursery stock. Causal bacteria are spread from diseased to healthy trees—principally by pruning tools and rain.

Methods of Control

Two general measures are recommended for control of this disease: (1) sterilization of tools used in pruning and suckering and (2) spraying or dusting with germicides.

Sterilization of tools

Tools can be sterilized with a good germicide such as bichloride of mercury (corrosive sublimate) 1 part per 1,000 parts of water, or 70% denatured (rubbing) alcohol. These chemicals can be obtained at most drug stores. Bichloride of mercury solution should be kept in a glass container, as it is corrosive and loses its germicidal effectiveness within a short time after coming in contact with metal. *Bichloride of mercury is deadly poisonous to man or animals if taken internally and should be so labeled and kept in a safe place away from children and animals.*

The use of a sterilizing agent is particularly advisable when suckering and pruning young trees, up to four years of age, as cankers on trunks during this period often girdle trees and cause their death. After a tree is over four years of age the use of a germicide on tools is not so essential, as trunks become increasingly resistant with age. While it is impracticable to sterilize tools before every cut, they should be sterilized after working on each tree.

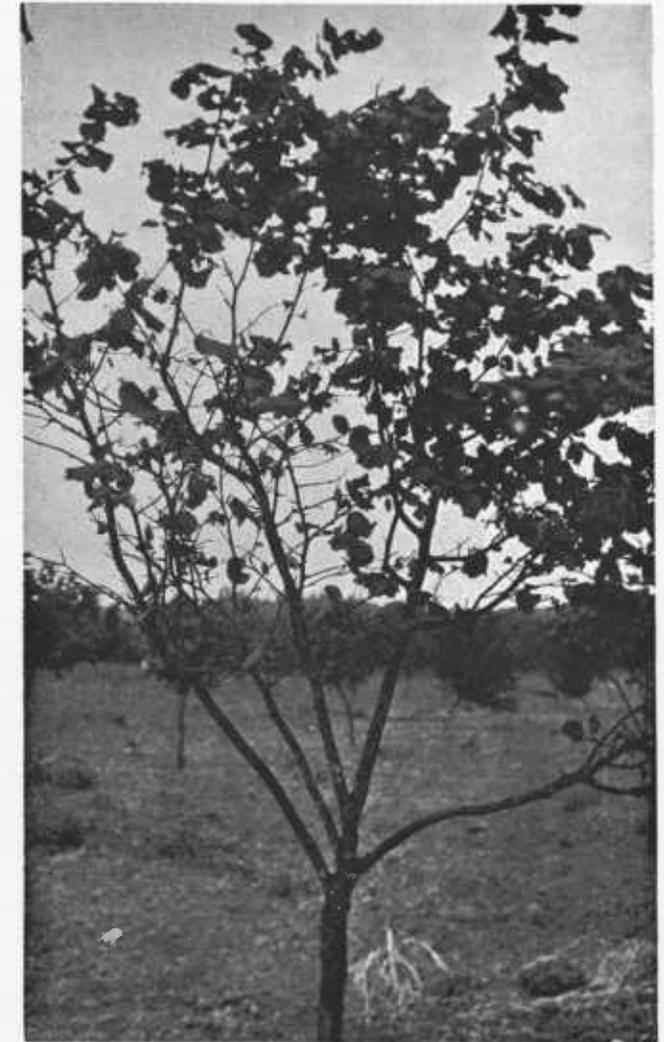


Figure 2. Bud and twig blight in a filbert tree. Killing of buds and twigs has reduced the bearing area appreciably.

Spray program

Bud and twig infection due to bacterial blight can be materially reduced in both young and old orchards by timely spraying with 6-3-100 Bordeaux mixture, or tribasic copper sulfate (6 pounds per 100 gallons). A good wetting and sticking agent will increase effectiveness of these spray mixtures.

In a normal season, one spray application in late August or early September (before the first heavy fall rains) usually is sufficient to

give commercial control of filbert blight. However, in seasons of heavy and prolonged rainfall during the fall and winter, when about three-fourths of the leaves are off the trees, a second application may be necessary.

Spray programs for worms and blight

It is possible to combine the insecticides Sevin or Guthion for filbert worm control with tribasic copper sulfate but not with Bordeaux. Sevin and Guthion are incompatible with Bordeaux. The combination filbert blight and filbert worm spray consists of:

1. Tribasic copper sulfate—6 pounds, plus 2 pounds Sevin (50% wp) per 100 gallons of water *or*

2. Tribasic copper sulfate—6 pounds, plus 2 pounds Guthion (25% wp) per 100 gallons of water.

Combination spray treatments should be applied at the time of the second filbert worm spray application. County Extension agents will notify growers when it is time for this application. If blight is severe, apply the blight spray separately in late August or early September (before the first heavy fall rains) rather than in combination with the worm spray.

Dust program for blight control

In general, dusts are not as effective as sprays on filberts, but properly timed and thoroughly applied dusts will reduce bud and twig blight.

A dust composed of 25% monohydrated copper sulfate, 50% hydrated lime, 21.5% talc, 2% bentonite, and 1.5% light mineral oil is recommended.

Since dusts are not as effective as sprays, a larger number of dust applications must be made to protect buds through the infection period. In a normal season, at least two dust applications should be made: (1) In late August

or early September (before the first heavy fall rains); and (2) in late fall when about half the leaves are off the trees. If the fall is unusually wet, a third application when most leaves are off the trees may be necessary. If at all possible, dusts should be applied when trees are wet with dew.

Thorough application essential

For maximum protection, a film of spray or dust material should completely coat buds in the leaf axil and twigs throughout the infection period.

For best coverage, the spray or dust machine should be drawn along one side of the tree row and back along the opposite side. It is impossible to do a good job of spraying or dusting from only one side of the tree.

Use pesticides safely

- Read the label on each pesticide container before use.
- Store pesticides in their original labeled containers. Keep them out of the reach of children and irresponsible people.
- Apply pesticides only as directed on the label.
- Dispose of empty containers safely. It is almost impossible to remove all material from a container. "Empty" containers contain small amounts of pesticides which could harm children or animals.



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