

LC 450

CHERRIES
**GUMMOSIS, PSEUDOMONAS, BACTERIAL CANKER & DEAD BUD
PROBLEMS**

Cherry tree problems are particularly evident after cool springs with prolonged rains. Dead buds and branch tips become evident as the trees put on their spring growth. Trees that apparently start to grow, show limbs with dead sections or with entire limbs dying out, are showing signs of problems that result from a bacterial infection of *Pseudomonas syringae*, primarily seen in young soft fruit orchards.

Pseudomonas, gummosis, bacterial canker and dead bud are names for the same bacterial problem. These bacterial problems will also affect apricots, peaches, plums, prunes, nectarines and ornamental cherry and plum trees.

SYMPTOMS

Cankers form under the bark, girdle the buds, twigs and limbs of trees or even entire trunks of younger trees over several years. The forming of gum is one symptom of "bacterial gummosis," but much of the damage may occur without this visual symptom. The gumming or dying of the leaf and fruit buds are usually the first symptoms to be noticed.

Buds which start dying in February and fail to develop into flowers or leaves, usually have been killed by the bacteria. This is called "dead bud." Lower limbs are affected before the upper limbs.

Some other aspects of *Pseudomonas syringae* are dead areas in leaves. The spots may be 1/4 to 1/2 inch in diameter and will not stop at the leaf veins. As with other aspects of Pseudomonas, a wet spring will show greater symptoms. Later in the spring, dead leaves will be attached to the buds. Cankers develop in the winter and early spring. During the spring and summer, girdled limbs may leaf out. Normally the leaves turn yellow and the branch and buds slowly die.

Gumming can be caused by infection from other diseases, damage to the bark from insects, poor growing conditions, mechanical or winter injuries. Spontaneous gumming occurs on vigorous branch growth from too much water or nitrogen fertilizer. Sweet cherries in wet or unfavorable growing sites show gummosis. The gumming will occur on the buds, twigs, branches or trunk.

DISEASE PREVENTION

Only trees with the varieties budded or grafted onto the scaffold limbs of F21-1 Mazzard rootstock or onto Mazzard seedling rootstock should be used in sweet cherry orchards. Many orchardists set out the F21-1 Mazzard or Mazzard seedlings, then bud or graft onto scaffold limbs the following year.

Use only virus-free scions of the desired varieties for budding and grafting and place them at least 8 inches away from the trunk on the scaffolds.

CONTROL

The following suggested practices will help in preventing and reducing the *Pseudomonas* problem. Since the bacteria may have systemically invaded the tree, protective sprays may not always give satisfactory control.

1. During the summer, prune dead or diseased wood back to where live growth has formed. Delay this practice until you see where new growth might develop. Pruning tools should be sterilized with 10% Clorox solution, alcohol or shellac thinner between trees by soaking or sponging the tools. Larger limbs can be painted with a disinfectant to prevent the bacteria from entering. Most cankers cease growth with the onset of dry weather. The grower needs to be aware of infected branches that will re-infect lower branches.
2. Thoroughly spray at least 2 times in the fall and winter. The first spray should be as the fall rains begin or early October. The second spray in early January. Use a bordeaux (12-12-100), copper or copper sulfate spray solution. Always read the label before purchasing or using the spray. Spray trunks, limbs and branches.
3. Rootstocks - Use only trees budded onto F21-1 Mazzard or Mazzard seedling rootstock.
4. Pruning - Remove any diseased wood during the fall, winter or summer prunings.

Past experience with good pruning and thorough spraying has greatly lessened the severity of infection in trees. Fertilizing in May with a good nitrogen fertilizer will help promote new shoot growth. Take a soil test to prevent over-fertilizing. Pruning also stimulates new shoot growth.

"Royal Anne," "Bing," "Lambert" and "Van" trees are very susceptible to *Pseudomonas syringae*. "Corum," "Sam" and "Sue" appear to be tolerant.

Prepared by Ross Penhallegon
Commercial Horticulture Agent
OSU/Lane County Extension Service
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