

Prune Cherries Immediately Following Harvest to Control Bacterial Canker

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Pruning sweet and tart cherries right after harvest helps prevent bacterial canker, a serious bacterial disease of cherry in New Jersey, and all other regions where the climate is humid.

We learned from the Europeans that the first line of control for this disease is to prune immediately following harvest. Avoiding dormant pruning lessens the chance of infection in the pruning wounds. On infected branches, leave stubs of 6 to 8 inches. This practice will prevent the canker from entering the trunk and scaffolds. The canker will not move down the stub.

Bacterial canker or bacterial gummosis of sweet cherry is caused by several *Pseudomonas* bacteria. This microbe infects flower buds and spurs. It can completely kill new spurs and leaves and then move into the trunk on cherry. This problem is especially difficult with our new Gisela dwarf cherry rootstocks as losing a scaffold or getting infection into the trunk will limit production, and the tree rapidly declines.

In our humid climate, the cankers can continue to develop in lateral branches and the central leader. In some cases, the cankers have grown to girdle and kill two-year-old wood. I have observed central leader dieback as a result. In older wood, the canker looks very much like a fire blight canker in apple. In most cases the canker begins to ooze a brown to amber exudate. It appears that under our humid conditions, this disease is very hard to control and can be devastating if control measures and the proper horticultural practices are not followed.

The source of inoculum may come from wild cherry trees in hedgerows. Black cherry, *Prunus serotina*, may be one source of inoculum for *Pseudomonas* during wind and rainstorms in the spring and summer months. Removal may be beneficial.

Overall, the best information on this disease is from a fact sheet from Ontario Canada written by W.R. Allen "Bacterial Canker of Sweet Cherry" NO. 88-0886 (see the end of this article for information on accessing this fact sheet). It has good color plates and lists control measures; however, it appears that under our humid conditions, this disease is very hard to control and can be devastating.

This bacterial disease is most troublesome in young plantings where it can result in losses of up to ten percent of the trees. On mature trees, it can reduce yields from 10–50%.

Control

Cankers get started mainly in the fall after most of the leaves have fallen and the trees are beginning to go dormant. The only effective way to control this disease is to reduce the number of bacteria before the trees enter their susceptible period, to avoid large, dormant-pruning cuts, and to use summer pruning to minimize the development of the disease. The bacteria that start these cankers are found on the surfaces of mature leaves and other green tissues, and do not come from existing cankers.

First, prune in the summer immediately following harvest. Second, the only successful control we have found is repeated applications of the Bordeaux mixture in September, October, and November and repeated again in the spring. Bordeaux mix consists of hydrated lime and copper sulphate. The rates and methods of mixing are important. We began our sprays the first week in September. Note however that sprays of Bordeaux mixture applied to green leaves must be combined with vegetable oil to avoid burning the

foliage. Four additional sprays 14 days apart should be applied. Bordeaux mix should also be applied in the spring with several applications before bud break.

It would be my recommendation that in all cherry blocks, a program of Bordeaux mix applications should be made this September. Careful observation and scouting of older blocks should be done in early summer to determine if this bacterial disease is present and control is warranted. It is my observation that if

any bacterial canker is observed in sweet cherry, a spray program of Bordeaux mixture is warranted.

Other Coppers

In a research trial at the Rutgers Snyder Farm, *Champ Flowable* copper was also evaluated compared to Bordeaux mix for phytotoxicity on cherry. The oil made Champ safer, as it did Bordeaux.

Fact sheets on Bacterial Canker

There are numerous fact sheets online for Bacterial Canker. Many include color photographs for reference. Below are the listings for several:

Ontario Canada written by W.R. Allen “Bacterial Canker of Sweet Cherry” NO. 88-0886:
<http://www.omafra.gov.on.ca/english/crops/facts/88-086.htm>

West Virginia University:

http://www.caf.wvu.edu/kearneysville/disease_descriptions/bactcank.html

Comparison of healthy trees vs. diseased trees:

http://www.caf.wvu.edu/kearneysville/disease_descriptions/disease_images/fig129c.jpg

University of California:

<http://www.ipm.ucdavis.edu/PMG/r105101511.html>

