

12 Steps to Manage Bacterial Canker of Sweet Cherry

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Pseudomonas syringae, which causes bacterial canker, is a major bacterial pathogen of young sweet cherry trees. Often, 10 to 20% of the trees in new orchards are killed by *P. syringae* within five years of planting. Control must integrate several techniques including the following:

1. Do not interplant new trees with old trees, which are major sources of *P. syringae*.
2. Keep irrigation water off the part of the trees above ground as much as possible for the first 2 or 3 years after planting. Consider withholding water in late summer so trees will “harden off” and not be as susceptible to low temperature injury in early winter.
3. Avoid all types of injury – mechanical, insect, frost. Paint all trunks white with latex paint to prevent winter injury. Adding copper to the paint is probably of little benefit.
4. Some studies show less bacterial canker when pruning is delayed until spring, even as late as after flowering in May. Less disease also occurs when summer pruning is used. Prune only during dry weather if possible.
5. Remove and destroy branches and trees killed by *P. syringae* from the orchard.
6. Mazzard F12-1 is one of the most resistant rootstocks. Resistance of new rootstocks is unknown at this time, but trees on Mazzard may have an advantage over trees on size-controlling rootstocks. Sweet cherry scion cultivars generally are susceptible.
7. Locate the orchard in an area less likely to be affected by frost and slow drying conditions.
8. Provide optimal soil conditions for growth of cherries, including attention to pH and nutrition. Application of excess nitrogen, especially late in the growing season, will promote late season growth that is susceptible to low temperature injury in early winter, followed by bacterial infection.
9. Control weeds. They often support large populations of *P. syringae*, especially grasses. Clover and vetch ground covers support lower populations. Consider clean cultivation of row middles for the first 3 years.
10. Fixed copper products or Bordeaux 12-12-100, applied in October and January may help, but strains of *P. syringae* resistant to copper are widespread in the Mid-Columbia area.
11. Test for and control plant pathogenic nematodes before planting if needed. High populations of ring nematode have been associated with more bacterial canker.
12. In the Parkdale area, plant trees in May rather than April.