



## Fire Blight: Trouble For Ornamental Pears!

As with many other things horticultural, diseases of ornamentals seem to wax and wane from year to year. This can in large part be due to the influence of weather as a facilitator of pathogenic advance and disease symptoms. One bacterial disease that seems almost rampant this year is Fire Blight in ornamental pears. Fire blight (*Erwinia amylovora*) can also be problematic in apple, ash, cherry, cotoneaster, hawthorn, and quince. But it presently seems most evident locally in pear trees, possibly because over the last decade or more pears, due to their uniform dense canopies and dependable spring flowering, have been a favorite planting on ornamental sites.

The disease first infects blossoms and leafy shoots. Spring flowers may appear droopy and water-soaked, then turn quickly brown. Soft recessed lesions on small twigs shut off vascular (cambial) function, seeming to move faster in warm humid weather. Sprinkler irrigation and the springtime use of quick release nitrogen can also function as accelerants for the disease.

Another diagnostic indicator of the disease is the reddish-brown discoloration of the sapwood of newly infected shoots and twigs. It is here that the disease advances through the tissue. For this reason it is important to prune away the highly infectious material well back . . . at least eight (8") inches . . . behind the visually diseased tissue. If the discolored sapwood remains, the disease remains! In se-

verely infected trees with much of the canopy appearing as though it had been scorched (hence the name Fire Blight),



this hygienic pruning can be worse than the disease, turning the tree into an ugly hulk that may be no longer desirable on the site.

Also, pruning equipment must be sanitized after each cut in order not to re-inoculate healthy tissue. Use two parts alcohol with one part water or bleach or Lysol for this purpose. Brown fallen leaves and all pruned out material must be collected and removed from the site since this inoculum-laden tissue can itself easily facilitate re-infection. While the best time to undertake this hygienic pruning is in cold dry weather, severity and timing may argue for immediate removal, if such is practically possible.

In large trees with severe visual disease presence this pruning is tedious, time-consuming, laborious, and therefore potentially expensive. Consequently, removal

of the entire tree may sometimes be recommended as the most viable option, especially since large Bradfords are also prone to mechanical failure as they gain size. Just last week I was invited to visit a property that had for years featured a row of nine pear trees across the front. I could immediately see that these trees had, as a single entity, grown into a beautiful and functional green screen while adding value and interest to the property by breaking the otherwise mundane straight line of the residences beyond. But sadly seven of the nine were significantly infected with this bacterial disease. Although the principals had noticed the problem the year before, they had evidently ignored it since it did not at that time appear to be important. I laid out the program for them, but finding someone who is both capable and willing to perform this tedious time-consuming work for an acceptable price is not an easy job.

If hygienic pruning is practical, it is also advisable to treat the tree with an antibiotic such as streptomycin. This is most effectively done in the spring at the time of flowering. It is questionable as to whether doing one step without the other is capable of producing an acceptable result.

In any case, my advice is to say that the next time you select an ornamental tree, try to find something other than Bradford pear. And if you are set on a pear, you might ask your nurseryman about resistant cultivars.

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