

# PROBLEM MANAGEMENT

by Balakrishna Rao, Ph.D.

## Line clearance in drought

**Problem:** *Should electric utilities reduce or maintain their current line clearance pruning programs during an extended drought period? The background for this involves utilities maintaining various distances between the energized wires and the encroaching trees. When trees become stressed, will continued pruning around energized wires affect the survivability, and what is the best approach to address people's concerns with this kind of pruning? (Minnesota)*

**Solution:** The answer to the first part of your question is yes. Greg Mazur, utility technical advisor from Davey Tree Expert Company, found that "the excessive heat and drought did not reduce shoot elongation," after studying more than 600 trees in northwest Wisconsin and shoot regrowth from pruning cuts towards the energized wires. Therefore, continue to prune the trees on your regular line clearing cycle.

As for the second part of your question, as far as we know there is no documented research data available for comments. However, the following comments might be helpful in explaining the situation to your concerned people. Drought has been, and perhaps will be in the future, occurring every now and then in many parts of our world. Many utility companies are conducting line clearing work throughout the growing season, year after year. But no severe effect attributable to pruning in previous years has been documented to date.

In all likelihood, drought has occurred many times in the past to pruned street trees without significant changes in survivability.

Our experience has been that minimum sunscald and/or dieback can occur in response to pruning but not widespread decline or mortality of pruned trees. We have seen a large number of established pruned or unpruned street trees decline. The problem was associated with abiotic stress factors, insect and/or disease activity. Among these, borer, canker and wilt diseases are considered to be the most destructive disorders. Often this type of declining syndrome can be coinciding with the pruning activity and then it becomes a concern to the public.

Pruning of plants like oaks and elms which are susceptible to wilt disease should be avoided during the insect vector flight period to minimize the disease spread. However, if these trees have to be pruned, application of a wound dressing compound might be beneficial.

## Fumigant use on diseased trees

**Problem:** *How good is Vapam soil fumigant in managing the root transmission of Dutch elm disease and oak wilt disease? What is the best way to apply Vapam, and how near to the healthy tree can it be applied? (Michigan)*

**Solution:** Vapam soil fumigant can prevent root graft transmission of Dutch elm disease and oak wilt disease if it is done properly and the product performs

well. For best results, read and follow label specifications. Use only when ground temperature at 3 inches is above 60°F and less than 90°F. The soil is usually warm enough when the spring flowering shrubs such as forsythia are blooming.

Be careful when using Vapam around desirable plants. It can severely injure or kill any plants that it comes in contact with.

Vapam releases a gaseous fumigant in the soil. This gas later dissipates, leaving the soil ready for planting. Do not inject it within 10 feet of the dripline of healthy plants. After injecting Vapam, you should wait for 10 days to remove the diseased trees. This will allow the fumigant to spread effectively and manage the root graft transmission. Vapam will kill the roots of diseased trees as well as healthy trees.

Apply one part Vapam into 15 parts water (1 oz. per 1 pint water, or 8 oz. Vapam per 1 gallon water). One gallon of Vapam mixture will treat 64 ft. of line or 128 holes. Where feasible, a chemical barrier of Vapam should be placed between a newly-diseased and a healthy tree if they are growing within 40 feet of each other. With an electric drill and auger, or crowbar, make holes six inches apart and approximately 18 inches deep along a line midway between these trees. Pour in 1 pint of the Vapam mixture per hole and immediately replace the soil and tamp the opening closed. For convenience, marked ropes can be used to space the recommended number of holes in a desired line.

The turfgrass in the treated area will also be killed. These areas may require seeding only after the fumigant odor is gone. Tilling or cultivating the Vapam treated area will help speed up this process. Radish seeds can be planted to detect any residual effect of Vapam, 10 to 15 days after application. If plants are normal, the treated area is safe to plant a lawn.

Make sure to wear safety protective equipment and thoroughly clean all tools after treatment to avoid any injury from future use.



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Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.