

EFFICIENCY CAN INCREASE BY PRUNING YOUNG TREES

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Pruning is one important area which offers a municipal forester and, to a lesser extent, grounds and golf course superintendents flexibility to manage trees and administer the department.

The key things to consider when setting up a pruning program include time, age and vigor of trees, and management of people resources. The old adage of "prune whenever the saw is sharp" is not optimal for wound closure or tree health. Current research by Shigo, Hart, et al clearly shows that there are two times each year to prune — March until bud break and August. Although pruning in March until bud break is far superior, another flush of growth (cambial activity) occurs in August which results in rapid compartmentalization and initial closure of wounds. Pruning during the fall or periods of decreased cambial activity results in slower closure, thus a greater opportunity for heartwood decay.

Age of the trees dramatically affects the time required to prune and for wound closure. The traditional five- to six-year pruning cycles are rarely completed on schedule. Normally, large,

mature trees require more time to prune; hence, greater cost per tree. Not only is this economically difficult under today's municipal financial conditions, but the pruning wounds are larger and more numerous, increasing the chance of tree decline and/or decay. Many times the more mature plant isn't vigorous enough to compartmentalize the wound, thus heartwood decay and decline of the tree are the end product.

Crews can prune sixty trees per day, rather than five, using less equipment.

Many municipal foresters should consider a stated policy of "prune only newly transplanted trees at planting and again two and four years after establishment." This would mean that pruning crews would be able to *minimally* prune forty to sixty trees per day, rather than two to five, using far less equipment. This increase in efficiency would allow the municipal forester to give pruning the highest priority in the spring, while still being actively involved in a tree planting program. The trees could be pruned to a central leader, leaving good wide angle branching.

These trees, pruned correctly when young, two to three times and not pruned after the fourth year (on the street), except to remove dead or storm-damaged branches, would be trained to develop a sturdy structure which is better able to withstand severe storms. Further, since the branches and wounds on young trees will be small, most rapid wound closure would result. Spring pruning might also be an opportunity to surface apply fertilizer, further maintaining the vigor of these trees.

Many may consider pruning only young trees a pipe dream, but consider how beneficial it would be to have pruned the trees two to three times early during their growth. By doing so, developing a structurally-sound tree versus the five-year pruning cycle which, due to time and finances, is rarely completed and is always a catch-up emergency repair operation.

A city forester, in addition to being an arboriculturist, must also be a manager of human resources. One would expect that time and manpower saved by pruning only young trees could then be put to work on the many other high-priority programs which are difficult to accomplish — tree fertilization, new tree planting, insect and disease control.

This young tree pruning concept gives the municipal forester an opportunity to be a professional manager and arboriculturist, i.e. one who develops, trains, and improves the health of city trees under his care. **WTT**



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