

Tree Mortality and the Community Forestry Program

Few people know more about tree death than the arborists and urban foresters who care for our nation's street and park trees. To get an overview of the worst causes of premature tree mortality, ten professionals representing all regions of the country were asked to rank the top 10 killers. Here are the results:



TREE CITY USA

Number 1 Killer: Construction Damage

Every respondent mentioned this preventable cause of tree deaths and rated it strongly into the number one position of infamy. It is clear that a priority challenge for urban forestry programs is public education stressing the value of saving existing trees during development projects of all kinds.

Other problems typically include rough handling of new trees, allowing roots to dry, not removing the root containers or bindings, and planting root-bound trees without cutting or straightening encircling roots.

Number 2 Killer: Improper Pruning

If ever there was a gap between what is known in the technical sense and what is actually practiced, pruning is the prime example. Despite the research and educational efforts that have been done on this subject, respondents named poor pruning practices as the second greatest danger to urban trees. Specifically cited were topping, other excessive pruning (too much of the live crown removed at one time) and the kind of "flush cutting" that Shigo and others have shown to break down a tree's natural defenses against the invasion of decay organisms.

Number 7 Killer: Soil Compaction

Soil compaction is one of the slower and more insidious causes of tree mortality. Mulching and regular aeration are good ways to minimize the damage.

Number 8 Killer: Bark Damage

Lawn mowers and string trimmers are the main culprits here - or, more correctly, the people who operate them carelessly. Proper instruction and supervision are key solutions, with mulch helping even more.

Number 3 Killer: Vandalism

This is one of the most difficult problems to prevent. In most cases vandalism is probably caused by an expression of anger or frustration unrelated to trees, or the actions of youngsters. Ways to prevent vandalism include: planting larger trees (minimum of 2" caliper); pruning lower limbs to at least 8' above sidewalks as the tree grows; and involving residents in the selection, planting and care of street trees.

Number 9 Killer: Misuse of Herbicides

Herbicides, especially those containing chemicals that work through reactions in the soil, should be kept away from the root zones of trees. Weed treatments on windy days should also be avoided and weed or lawn crews should be given special instruction about tree roots and how to avoid damaging them.

Number 10 Killer: Automobiles

Not surprisingly, bark damage and the breakage of young trees caused by cars is a common occurrence in urban areas. Traffic barriers, proper curbs, and planting out of the reach of bumper and tailgate overhang can help reduce this damage.

Number 4 Killer: The Wrong Tree for the Site

Poor species selection dooms many trees right from the start. Disease resistance and suitability to soil and climate conditions were mentioned as the factors most often overlooked. Planting large tree species beneath utility lines was also frequently mentioned as asking for trouble. The involvement of qualified foresters and arborists in the planning stage of all planting projects could easily eliminate this unnecessary cause of tree mortality.

Number 5 Killer: Lack of Watering

A systematic means of watering during dry spells - especially newly planted trees - is one of the essentials of a well-managed urban forestry program. Enlisting the aid of local residents is one way to do this if equipment and paid personnel or contractors are not available to do the job.

Number 6 Killer: Poor Planting

Proper planting is essential. It requires special training of crews and close supervision. Planting too deeply was the problem mentioned by several of our

How Much Does Your Community Spend on Tree Care?

Following their exhaustive study of urban forestry in U.S. cities of all sizes, Drs. James Kielbaso and Vincent Cotroneo of Michigan State University concluded that, "a forester, or at least someone acting in a similar capacity, greatly increases the likelihood of favorable tree management in a city." But they also found that only 23 percent of the cities they surveyed had such a professional. In addition, it was found that cities typically devote less than half of one percent of their budgets to tree care - whereas the need for adequate funding to protect the public treasure of urban trees is actually twice that amount.

An urban forestry program is one of the best investments a community can make...

- to increase the lives of trees.
- to prevent the loss of money spent for planting stock.
- to prevent property damage and personal injury.
- to increase property values.
- to give residents all the joy and practical benefits that come from abundant, healthy trees.