

Common Mistakes of Tree-planting

Properly planting trees is not rocket science—it is in fact a lot more difficult and challenging, given the potential complex mixture of tree selection and site characteristics as well as environmental, biological and social variables. But successfully selecting, planting and caring for a tree until it's established is quite doable, especially if you escape the challenge of what I commonly refer to as “loving your tree to death.” There is a plethora of great information on the web (see references below) on how to properly plant and grow your tree, but here are some of the most common mistakes, mistakes that have led to the untimely death of far too many trees.

- **POOR SELECTION.** The tree you select must match the site characteristics you have to work with, and soil quality is one of the biggest drivers. Quality of nursery stock is also a big factor, “once a poor quality tree—always a poor quality tree.” Trees do not heal from defects and root quality problems, they either seal them over with wound wood, or the defect continues to worsen over time. Many a tree death can be traced back to poor quality stock and initial defects.
- **INADEQUATE ROOT SYSTEMS.** We tend to buy trees based on the stem and canopy and completely overlook the root system. The root system is the driver in getting your tree off to a healthy start in the landscape, and all too often the root system is too small to support the canopy. A good rule of thumb to follow is that, for every inch of tree diameter, you should have 12-14 inches of root ball.
- **POOR PLANTING SITE.** This relates primarily to soil type and drainage pattern. Sites with high clay or sand contents will limit species selection and adaptability. Regardless of the site, there is almost certainly a tree that will thrive in it, but you may need to do a little research to see what is currently growing well in the area.
- **GIRDLING ROOTS.** A majority of nursery stock is being grown and sold in round plastic pots or containers. While it is possible to find high quality stock in containers, a high percentage of root systems from round pots have container- and stem-girdling roots, roots that spiral around the container and/or stem of the tree. Left as is, they may lead to the death or failure of the tree.
- **PLANTING HOLE.** There is a tendency to dig a hole that is either too small or too deep or, even worse, both too small and too deep as in the case of soil augers. Take the time to dig and create a planting site which is a shallow hole no deeper than the root ball and much wider—two or three times wider than the root ball if possible. Breaking up the soil outside the rootball will allow tree roots to more quickly grow out into native soil and get established.
- **PLANTED TOO DEEP.** The planting hole should be no deeper than the root ball itself. Planting the tree too deep, even just 2-3 inches too deep with many tree species, can greatly reduce vigor and lead to the slow death of the tree. Before planting the tree in the planting site, locate the first level of primary lateral roots and keep them at or near the soil surface. It is always much better to plant too shallow rather than too deep.
- **MULCH VOLCANOES OR NO MULCH.** This is a tree killer either way—too much mulch or not enough. Too much mulch, the mulch volcano effect, can trap moisture around the tree and greatly reduce oxygen levels in the soil, a leading cause for tree decline. Not enough or no mulch creates a situation where tree roots are competing for water and nutrients with turf grasses and/or are exposed to weed-whackers and mowers next to the bark. Mulch should be shaped like a crater, with very little (less than 1 inch) next to the stem and tapering outward to approximately 4 inches deep at the edge. This will keep equipment away from the tree, improve soil moisture and oxygen levels and the organic matter in the mulch will create better growing conditions.
- **IMPROPER WATERING.** More trees are killed annually from too much water than not enough. This is particularly common in heavy clay soils or in over-irrigated fescue lawns. Too much water can suffocate tree roots and lead to a slow decline or the eventual loss of the tree. How much to water is based on soil type and the type of tree you are trying to grow, as some trees require much more water than others. The quick and dirty way to tell if there is enough soil moisture is to test if you can easily push a long handled screwdriver or similar probe down into the soil 10-12 inches. If you can, there is probably adequate water.

To plant a tree is easy. To properly select and plant a tree that's right for the site requires careful review, thought and planning. But it can be successfully done and, by avoiding some of the common mishaps listed above, you should be able to plant and grow a tree that will benefit many generations to come. More resources at: nfs.unl.edu