



GARDENING WITH TREE ROOTS

Of all growing things, trees are—beyond a doubt—most awe-inspiring. We choose the communities, the very homes we live in, because of the grandeur of trees. They may be lining the boulevards or cloaking our porches and patios with their leafy umbrellas.

Gardening beneath trees is another matter altogether. Our best efforts may be disappointing. An understanding of what is happening under the surface of the soil may help turn our disappointment into success.

THE LANDSCAPE BELOW GROUND

Contrary to what many people imagine, tree roots grow horizontally and sometimes extend for 40 feet or more beyond the branch tips. Because of the heavy clay content of our soils, tree roots in the Midwest are often not more than 24 inches deep.

Radiating out from the large roots that anchor the tree are many small, often thread-like roots that actually grow upward into the top layer of soil and leaf litter. These small absorbing roots are concentrated in the top four to eight inches of soil.

A single tree is capable of removing as much as 156 gallons of water per day from the soil. The canopy of the tree also acts as an umbrella, directing rainfall to the branch tips. A tree can be a fearsome competitor for water and nutrients, especially for new plants with comparatively small root systems.

KEEPING THE TREE HEALTHY

First, recognize that almost any aggressive method used to insure that the new garden gets off to a good start, is likely to have a negative impact on the tree. Which is easier to replace—the tree or the garden? For the health of the tree, keep these pointers in mind:

Do not sever any large tree root. If unavoidable, thin the crown of the tree at the same time. This will bring the crown and root system back into balance.

Cultivating mushroom compost or other soil amendments into the soil is often recommended in order to build a new garden. This often damages the small absorbing roots of the tree. Avoid cultivating in large surface areas. Then expand the bed gradually to minimize root damage and allow the tree to adjust.

Adding a new layer of soil over the existing soil can get the garden off to a good start, but also smothers the root system of the tree, especially if the soil is heavy, dense or deep—in excess of six inches. Keep the new soil mixture light and do not use clay. Composted materials will benefit both tree and garden. Again, begin small and gradually expand. Keep in mind that after only one season, tree roots are likely to invade.

Never mound soil over the crown of the tree. Keep any soil or mulch pulled back four to six inches from the tree trunk.

FALLEN LEAVES

The key to gardening successfully with trees is the use of mulch. Mulch is simply organic material that breaks down over time, eventually becoming soil. Mulch can be last year's fallen leaves. As leaves break down, they turn into "leaf mold." Leaf mold is light and open and plant roots grow through it easily. Best of all, it's free.

In the forest, it is the fallen leaves, decaying vegetation and wood fall that allow plants to thrive in balanced coexistence. If the gardener allows these materials to accumulate, eventually they will provide a rich source of nutrients for both tree and garden. Additional materials can be composted if desired: eggshells, coffee grounds, or clippings from the garden. The lazy gardener's approach might be to let all composted and composting materials accumulate on site. After a season or two, turn gently and plant. Contact your favorite nursery for suggested plants for deep shade or dry shade. For more difficult areas, stick to the ones that are most likely to perform.

For areas where building up the soil is not practical, plants simply just don't want to cooperate, or perhaps a focal point is desired, consider a container. A hosta can be elegant in an antique urn and the slugs can't reach it! Colorful annuals and foliage plants abound for containers. Lest you think there's only the same old impatiens available, look again, and you will be pleasantly surprised.

SHREDDED WOOD CHIPS

Wood chips are also mulch. They simply take longer to break down. They are attractive and can also function as a walking surface. In a heavily shaded yard with lawn grass in poor shape, mulch can function as a playing surface for children.

Many gardeners already know that trees and lawn are not always compatible. Mulched trees are healthier and can grow 25% faster when competitive grass is eliminated. A freshly mulched bed is much more attractive than a bed of struggling groundcover.

Shredded hardwood mulch is not only an attractive and functional surface, but it also can be a very practical tool the homeowner can make use of when planning—or completely rethinking—the shady yard.

A NEW APPROACH TO DIFFICULT SHADE

Traditionally, a back yard is viewed as a carpet of lawn surrounded by planted beds filled with trees, shrubs for privacy and flowering plants. If the yard is heavily shaded, eliminate the struggling lawn grass and replace with shredded hardwood. A network of paths and mulched areas can instead guide the visitor through the garden. Create "islands" of planted beds amongst the mulched paths, and, if possible, away from competitive roots. These islands can be gently bermed—

they can even be former compost piles—providing pockets of good soil with excellent drainage where root competition is not so severe.

The creative use of natural materials gives us many ways to live and garden under the shade of elegant old trees.