

## **Mulch – A Tree’s Best Friend**

### **Part I**

Mulch, when applied correctly, can be one of the best things to help increase the health of your trees. I have divided this article into two parts. The first part covers the benefits of mulch, and the second describes the proper steps and procedures to use when applying mulch to trees.

The benefits of mulch in regards to tree health have been well documented throughout the years. Quality mulch helps to retain soil moisture, cut down on competing weeds and grass, releases beneficial nutrients into the soil, and helps to cut down on damage related to mowers and string trimmers. Although mulch can be extremely beneficial to a tree’s health, mulch can also be very negative when not applied correctly. Let’s take a closer look at the benefits mulch can bring your tree.

Mulch does a great job of helping retain soil moisture. When there is infrequent or insufficient rainfall, this is a vital key with a tree’s establishment and survival. Mulch also helps funnel rain into the root system, when many times the rain would runoff without soaking deep into the soil.

Mulch can also be a very effective barrier against competing weeds and grass. That is not to say mulch is a cure-all in this department. You will still have to pull weeds and grass, but the spread and establishment of these plants will be greatly reduced. At this point, you may be wondering why it is so important to keep weeds and grass out of the root zone of a tree. The answer is that these plants greatly out compete trees with uptake of water. What this equates to is this: the more grass in the root zone of a tree, the less available water there is for the tree to take up through its roots. Studies have shown that the amount of fine roots, which are the part of the root system responsible for water and nutrient uptake, are 100-200% greater in number in areas that are mulched compared to similar areas that are covered in grass.

One benefit of mulch that often goes overlooked is its nutrient releasing

capability. As mulch decomposes and breaks down, nutrients vital to a tree’s health are released. This is a very important fact when you consider that most urban soils are deficient in many of these nutrients, especially the clay soils that we encounter here in Clarksville. As mulch decomposes, it also helps build a better soil structure that is beneficial to trees. Clay, the main soil component in this area, is composed of extremely small soil particles. These particles are packed tightly together, and do not allow for much pore space for the infiltration of water and oxygen into the soil, and also for root growth. As mulch breaks down over the years, it helps to open these pore spaces and make a more favorable environment for root growth. Think of mulch as recreating the natural process of what leaves do in the forest. Now keep in mind that this does not happen overnight. It is a long process that spans many years, but it is never too late to start.

A final benefit that comes from mulching is that it keeps trees protected from trunk injuries from mowers and string trimmers. Many people do not give much thought to hitting trees with this equipment, but the results can be devastating. Even small wounds to the trunks of trees create a great avenue for disease. And once a tree develops a canker or rot disease in the trunk, the only alternative you usually have is to remove the tree and replant. Young to middle-aged trees are typically more adversely affected, but I have seen numerous mature oak trees succumb to insect and disease brought on by repeated damage by mowers. It is heart breaking to see a large and noble tree to be removed due to our failure to keep it out of harms way.

Now you know a few of the many benefits that mulch can provide to your trees. As you can see, mulch can be an invaluable tool to improve and help maintain a tree’s health in our exacting urban environments. Next week I will take you through the proper methods of mulching, and discuss some of the negative effects that can come from improper mulching.