

As the drought persists in western Nebraska, property owners grow more concerned about the health of their trees and how to properly care for them. One way to help is to renew or apply mulch. Properly applied mulch adds to the health and vigor of the tree. The important words here are “properly applied.” Mulch that is improperly applied can impair good tree health.

Properly applied mulch can:

- help maintain soil moisture
- provide needed nutrients
- improve soil aeration and limit soil compaction
- protect the tree from mechanical damage
- reduce the growth of unwanted plant competition
- provide a better environment for beneficial microorganisms

Mulch mimics nature because the forest floor is generally covered with dead leaves, branches and other organic materials. As these materials break down they provide nutrients the tree picks up through the root system.

Research shows that tree roots grow much closer to the soil surface than one might think. In fact, 90 percent or more of the roots are within 12 to 18 inches of the soil surface. Tree roots can grow outward from the tree more than two times the tree’s height. A thin layer of mulch over the soil surface of this tree root zone provides a favorable environment for root growth.

Many materials can be used for mulch, but organic mulch is best. Look for shredded wood or irregular-sized wood chips. Bark chips are lighter in weight, so can blow away more easily and they do not readily decompose to add organic matter to the soil. Pine needles make excellent mulch as they provide acidity to the soil and their structure provides a loose network or material. However, do not use grass clippings as they will mat down, shedding water rather than letting it percolate through.

If you have access to freshly chipped wood, let it compost for about three to six months before using it.

And certainly the leaves that are raked in the fall can be used as well.

Inorganic materials such as river rock, lava rock and rubber mulch do not provide as many benefits as organic mulch. Black plastic and woven or porous landscape fabrics, which are frequently placed below mulch, can severely limit oxygen and water infiltration into the soil. Rock material heats up the soil and surrounding plant tissues, leading to stress in the plant. The use of such materials is not recommended.

When applying mulch, aim for a depth of three inches. Thicker layers may attract hibernating rodents and other unwanted pests, especially in winter. In addition, mulch that is too thick restricts air and water movement into the soil, and causes poor rooting development in trees.

Properly applied mulch should be a minimum of six feet in diameter, or at least a three-foot radius from the larger trunks. The mulch at the trunk flare or stem of the young tree should be just enough to cover the soil, somewhat resembling a flattened donut placed around the tree. The mulch should be kept away from the trunk flare so it remains visible. Do not pile the mulch against and up the trunk.

If you must get carried away with mulch, mulch out, not up. With a larger area of mulch, the benefits to your tree will increase. Remember, mulching mimics the forest soil environment. Proper mulching can help your trees and shrubs survive the rigors of summer drought and winter cold and get them off to a good start in the spring.

For information about mulch for trees, see the Nebraska Forest Service series on the website at <http://nfs.unl.edu/ReTree/retreenebraskasummertreecare.asp>. Or contact your local extension educator.