

Garden Update

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Trees: Mulching and Pruning

Mulching

As a final step in the planting process, newly-planted trees benefit from mulch. Not limited to new trees, even well-established trees benefit from cooler soils that promote root growth and nutrient and water uptake. With the task of mulching comes added attention to the amount of mulch used. “Mulch volcanos” are the tongue-in-cheek adage used to describe the cones of mulch piled high around trunks. Not only do these foster homes for voles, who love to eat the tender water-conducting tissues beneath bark, but mulch volcanos promote decay by rotting the base of trees. The practice has become epidemic with this “more is better” approach, fostering a new industry of arborists and landscape managers who specialize in removing mulch volcanos and properly installing mulch rings that are better suited to tree health and are characterized as “mulch donuts”. This approach provides 2-4 inches of mulch spread over the root zone, leaving the center 3-4 inches free of mulch to allow air circulation around trunks. At a minimum, especially for new trees, the mulch ring should extend three feet out from trunks, with beds expanded as trees grow.

Forgo the placement of landscaping fabric or plastic beneath mulch. These materials interfere with the exchange of gases at the root zone and make soils slimy. Rock of any sort should be bypassed too, but for different reasons than landscaping fabric. Rock mulches increase soil temperature on hot summer days, which in turn interferes with tree root uptake of water and nutrients. Instead, use wood chips or shredded wood for mulch. Check the mulched areas each spring and add more mulch as the old decomposes, maintaining the 2-4-inch depth.

Pruning

Knowing when and how to prune trees is important to tree health. Research by Dujesiefken, *et al*, indicate the months of April, May, and June are ideal for pruning, promoting timely wound closure. Initially, pruning of newly-planted trees should be kept to a minimum, except for removing broken, dead, and rubbing branches. Even if branches are low on the trunk, but otherwise healthy, they should be left in place to promote trunk taper. In the study of tree biomechanics, trunk taper is the gradual widening of the base of the tree trunk, which contributes to stability under wind and snow loads. Trees that are planted too deep and those that are limbed up too soon will not develop a strong taper.

Forget about thinning as a pruning practice to lessen wind loads. A study by Quine and Gardiner (2007) found that densely-crowned trees survive severe winds better than those thinned trees that are deemed “wind sales”. This is, in a large part, due to the ability of leaves, twigs, and branches to dampen the force of wind. Crown thinning negatively impacts a tree’s ability to withstand wind loads, leading to limb and tree failure, which in turn can cause harm to people and structures.

When pruning tree branches, be sure to make cuts just outside the branch collar, the swollen area at the base of branches. The collar is made up of branch AND collar cells for timely wound closure. For removing larger branches, a 3-part cut ensures branches don’t rip downward into the branch collar during removal. More information about pruning may be found on the Nebraska Forest Service website: <https://nfs.unl.edu/publications/pruning-trees>.