



*This article is part of a weekly series published in the Batavia Daily News by Jan Beglinger, Agriculture Outreach Coordinator for CCE of Genesee County.*

## Master Gardener Corner: Volcano Mulching is a no-no

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*This week's article was written by Master Gardener David Russell. David can be found in the Master Gardener office on Mondays and Fridays, from 10 am to Noon. The Master Gardener Helpline has Master Gardeners available to help answer your garden, insect, weed and other related questions Monday – Friday, 10 am to Noon.*

In my travels around towns, cities and states over the years, I have noticed an increase in the landscaping technique known as “Volcano Mulching.” From private residences, to apartment this as a way to beautify their areas. I am the first to admit it is very nice to look at.

What is volcano mulching you ask? Volcano mulching is an improper mulching technique where excessive amounts of mulch have been piled high against the tree trunk. Everyone likes to add mulch around their shrubs or trees to add curb

appeal. The mulch may have started out three to four feet from the trunk of the tree at a depth of one to two inches. As the mulch is layered towards the tree trunk, it can reach twelve inches deep at the trunk and it is the shape of a volcano. While it looks nice and neat, it is very deadly to the tree. You have volcano mulch if your trees look like they are erupting out of a mountain of mulch.

When you plant a new tree you are instructed to make sure that the root ball is level or slightly above ground level. This will allow the root crown to “breathe” and not allow excess water to build up next to the crown, which over a period of time can drown the tree and cause root rot. When you create a volcano mound of mulch you defeat everything you have done by correctly planting your tree.

Piling mulch high against the trunk allows moisture to sit next to the bark allowing disease and decay to set in. The mound of mulch is great at shedding moisture from its surface but even greater at holding moisture within the mulch. Insect damage to the trunk and root crown is intensified because of the extra cover afforded the trunk boring little critters. This also allows rodents to attack the bark. Mice and voles chew the bark for food and can girdle the trees. It can also give fungus and insects an easier entrance point to the tree.

Thick layers of fine mulch can become matted and may prevent the penetration of water and air down to the roots. Roots need air to survive. Burying root systems under excessive amounts of



*Example of “volcano mulching”  
Photo courtesy of David Russell*

mulch reduces the amount of air in the soil, causing trees to slowly decline. Volcano mulching also encourages the growth of roots into the mulch, as they are oxygen starved if they try to grow down. These surface roots allow for a multitude of problems that can lead to the trees demise. If the mulch is removed, these roots are exposed to the damaging effects of lawn mowers, weed whackers, etc. Mulch piled around the trunk can also encourage secondary root growth, which can encompass the trunk and choke the main tree roots, leading to tree death.

Volcano mulching can also prevent the development of a normal root flare (where the trunk widens at the base as it transitions to the root system). The root flare helps to stabilize the tree. Poor development makes the tree more prone to falling over during a storm.

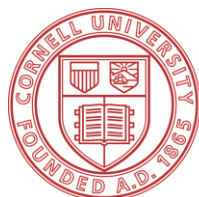
There is also a slow but serious side effect to this style of mulching. Most people use hardwood mulch as it lasts longer, looks better and is easier to care for. However, most people renew the mulch layer every year as the mulch decays and shrinks down. This only increases the chance of tree problems, both biotic and abiotic. When a tree is stressed from environmental related problems (abiotic), it becomes vulnerable to fungus and bacteria attacks (biotic).

Mulch applied properly provides many benefits to the tree. It can help maintain proper soil moisture. Mulch can help control weeds and prevent weed seeds from germinating in the soil. Having a ring of mulch around a tree can protect it from weed-eaters and lawn mowers. Mulch acts as insulation to help keep soil temperatures cooler in the summer and warmer in the winter. As organic types of mulch decompose they can improve soil aeration, structure and drainage.

For most soils, apply a 2 to 4-inch layer of mulch under the tree. If a drainage problem exists a thinner layer is recommended. Mulch out to the tree's drip line or beyond if possible. Pull the mulch back a few inches from the main trunk creating a donut-hole. Mulch should NOT be placed against the trunk of the tree.

While aesthetically pleasing to some, volcano mulching results in the slow death of a tree. If mulch is piled against the tree trunk, pull it back several inches so that the base of the trunk and the root crown are exposed. Questions regarding proper mulching can be answered by calling or emailing your local Cornell Cooperative Extension office.

*Resources for this article include: North Carolina Urban Forest Council, University of Illinois Extension, NC Cooperative Extension, and University of Georgia Extension Service.*



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