

Tree Care Basics

Proper Mulching Techniques



Mulching is one of the most beneficial practices for better tree health. Applying mulch to the soil surface maintains moisture and improves soil conditions. However, proper application is important.

Benefits of Mulching

- Insulates the soil, protecting tree roots from extreme summer and winter temperatures.
- Reduces soil moisture loss.
- Improves soil biology, aeration, drainage, and structure of the soil.
- Minimizes soil compaction and erosion.
- Controls weed germination and growth, reducing competition for nutrients.
- Increases soil fertility as it decomposes.
- Reduces the likelihood of tree damage from string trimmers and mowers.
- May inhibit plant diseases.

Types of Mulch

Each type of mulch will decompose at different rates depending on the soil microorganisms present, climate, and material used. Mulch will need to be replenished as it decomposes. Mulching choices include:

- Organic mulch.
- Wood chips.
- Pine needles.
- Hardwood and softwood bark.
- Cocoa hulls.
- Leaves.
- Compost mixes.



How Much Mulch

Adding too much mulch can be harmful. The recommended mulch depth is 2 to 4 inches. Thick layers of mulch can become matted, reducing water and oxygen penetration. Excess mulch can also cause decay, delay the onset of dormancy or bud break, and provide hiding places for rodents. Wait to replenish or refresh mulch after it has decomposed.

Improper Mulching

Improper mulching may cause some significant problems for trees. Overmulching and applying mulch against the sides of the trunk and root flare are among the most common causes of tree decline.

Mulch against the tree can soften the bark, leading to insects, diseases, and root girdling. Thick layers of mulch can reduce soil drying, generate excess moisture in the root zone, and cause root rot and stress to the tree.



FIG.1. Example of incorrect mulch application around a tree.
Photo: Sarah Vogel, Illinois Extension.



FIG.2. Example of correct mulch application around a tree.

Learn more on how to mulch trees with UConn Extension by scanning the QR code or visiting youtube.com/watch?v=BXAx_PgjEfo



Proper Mulching Guidelines

Application techniques are essential to the health of trees. Follow these guidelines when applying mulch:

- Apply a 2 to 4 inch layer of mulch in well-drained sites. Composted materials should be applied in a 2 to 3 inch layer and coarse mulches in a 3 to 4 inch layer.
- Apply mulch near but not touching the trunk.
- Keep mulch at least 4 inches away from the trunk.
- Extend the layer to the dripline or as far out as possible. A 3-foot radius ring is the maximum for most trees.
- If mulch is already present, check the depth. If enough is present, refresh the appearance with a rake, breaking up matted layers.
- If mulch is piled against the trunk, expose the base of the trunk by pulling back the mulch several inches.
- Check under mulching to ensure rodents and other pests have not moved in.

Authors

[Sarah Vogel](#), horticulture and natural resources educator, sarahv@illinois.edu

[Jenny Lee](#), master gardener/naturalist program coordinator, jalee73@illinois.edu

References

Ricard, B. "Beware if Volcano Mulch: How to Mulch Your Trees". YouTube, uploaded by UCONN Extension, University of Connecticut College of Agriculture, Health, and Natural Resources. 9 March 2020, youtube.com/watch?v=BXAx_PgjEfo

Modified March 2024



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

extension.illinois.edu