



Mulching 101

Definitions:

- **Root crown (or collar)** - the part of a plant where the stem arises

Benefits:

- **Insulates plants:** mulch can act as a barrier between the air and soil, which moderates topsoil temperature to protect a plant's root crown/collar. A mulched landscaped bed will be cooler than a bare-soil bed in the summer (which lessens heat stress on plants). In the winter, a mulched bed may take longer to freeze.
- **Contains organic plant food:** organic matter in mulch gives "free" nutrients for plants to absorb.
- **Protects from soil erosion on steep slopes:** rather than precipitation falling directly on a bare-soil planting bed (which can lead to pooling water and erosion), a well-maintained mulch layer will absorb some of the water, giving it adhesion to stick to the topsoil. **Note:** if soil erosion is a major concern with your property, mulch alone may not be enough. Look into planting drought tolerant grasses that push their roots at least 2 feet below grade.
- **Conserves soil moisture:** a major component to how much water mulch can hold is the quantity and quality of its fibrous material. This can act like a sponge that keeps topsoil cool and moist during the summer; (keeping plant roots happy).
- **Helps prevent weed growth:** weeds need light and warm soil to re-emerge after they have been sprayed or pulled. Most weeds can gather enough water and nutrients to break through topsoil in early spring. Adding 2-3 inches of mulch over topsoil will keep weeds at bay.

What to do with Mulch:

Choose organic materials over synthetic (e.g. turf cuttings, fallen leaves, tree bark, fruit peelings, and vegetables). Organic matter slowly decomposes, which helps keep topsoil loose and provides nutrients to plants. This improves the topsoil's water infiltration rate, root growth and soil water-holding capacity.

- Add mulch in the spring after the frost has time to melt
- Rake the top 1-3 inches at the beginning of every growing season. This mixes up the organic matter so nutrients are more evenly distributed, and helps aerate the topsoil

What NOT to do with Mulch:

- Apply mulch to cold, damp soil. **Why?** Because adding mulch to cold damp soil can lead to diseases and inhibit seed germination. It is important for the topsoil to dry out first.
- Add more than 3 inches. **Why?** Because the recommended depth is 2-3 inches (when wet). This thickness has been studied to provide just the right amount of heat moderation, temperature regulation, and safeguard from weed emergence, plant root-zone moisture, and nutrition.



Types of Mulch

There are two major parts of a mulch: organic matter and inorganic matter.

- a. Organic material: composted fruits and vegetables, leaves, grass, bark, wood chips
- b. Inorganic material: rock, perlite, coir (and other fibrous material)

The key difference between these types of mulch is nutritional benefit. Some inorganic material has the capability to hold on to a small amount of fertilizer, but they do not contain any nutrients.

Pros and Cons of Organic mulch material and Inorganic mulch material

Pro	Con	Pro	Con
Organic		Inorganic	
<ul style="list-style-type: none"> • Nutrition bank • Heat blanket • Temperature regulator 	<ul style="list-style-type: none"> • Susceptible to mold • Needs regular replenishment • Must be rotated and inspected 	<ul style="list-style-type: none"> • Water percolation • Water absorption • Aeration 	<ul style="list-style-type: none"> • Tends to settle • No nutrients • Poor temperature regulator

Recommended material mixture: 1/3 organic, 2/3 inorganic