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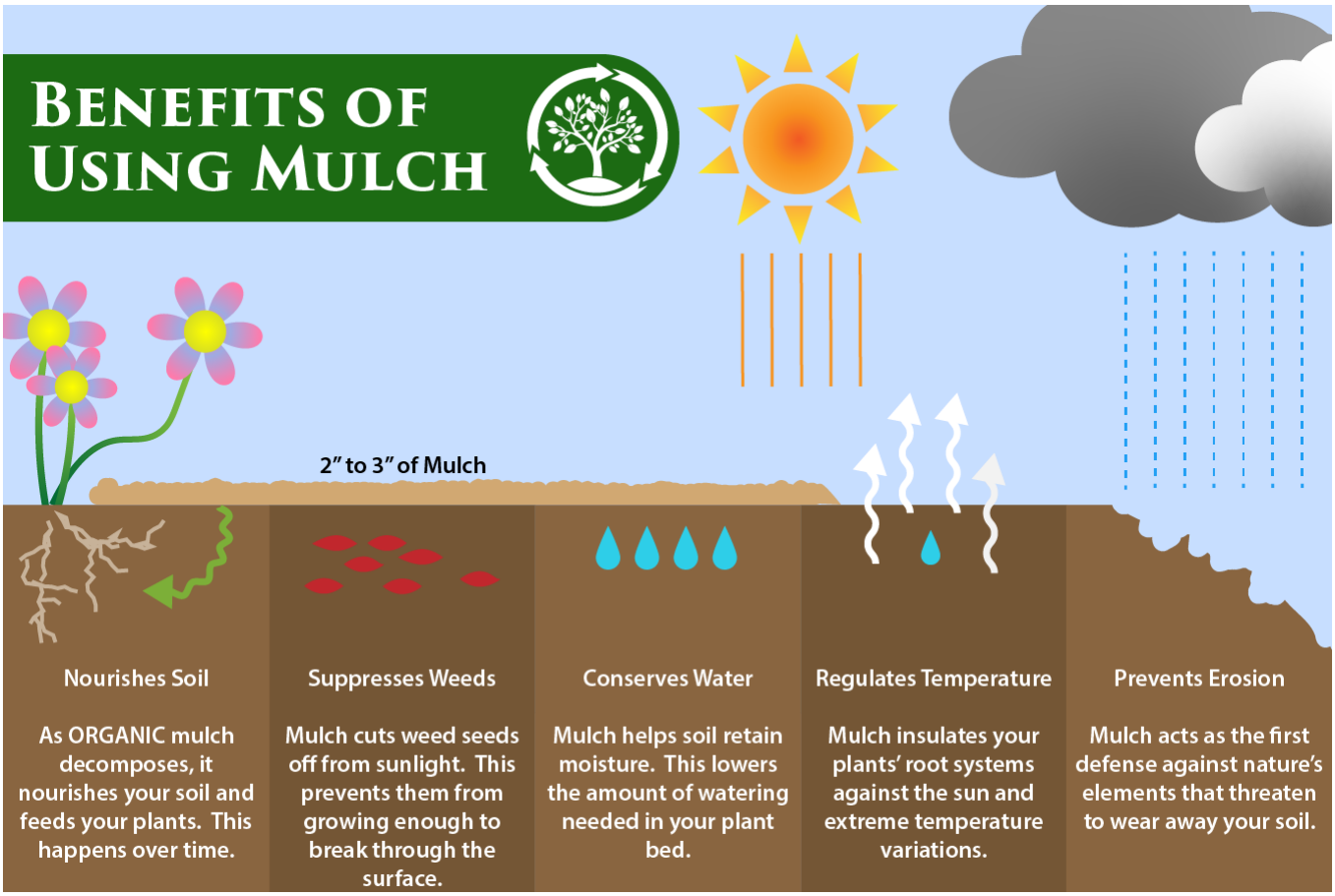
Organic Mulch Options and Horticulturally Accepted Recommendations

Most clients are familiar with the use of mulch in maintaining a landscape, but there is a wide array of mulch types available along with some common misconceptions and installation practices that can do more harm than good to a vibrant landscape. The information contained within this info packet is intended to assist clients in making educated decisions on how to best utilize mulch practices as part of their landscape management programs. All references to "*mulch*" refer to organic materials unless otherwise indicated.

Mulch {Organic}

- *noun: material (such as decaying leaves, bark, or compost) spread around or over a plant to enrich or insulate the soil.*
- *verb: to treat, cover, or spread with organic material*

Benefits {in order of Horticultural value}



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1. **Moisture retention**: Think of mulch as a sponge that absorbs irrigation, rainfall, dew, etc. and releases it into the soil as needed. It should surround the root zone of plant material, supplying outer feeder roots with a continuous supply of moisture.
   - *Caution: Excessive mulch (> 3" depth) or mulch piled against trunks of trees, shrub branches, or perennial stems can lead to decay and rot while encouraging fungal activity that can adversely affect the health of the plants it is intended to assist. Excessive mulch (i.e., mulch volcanos) can also alter root growth leading to girdling roots that are trained to grow up and around towards the trunk instead out and away in search of moisture in the root zone.*
   - *Depths: More is NOT better! CPHort recommends the following mulch depths:*
     - *New Plantings: Two-Three (2-3") depth of mulch for moisture control*
     - *Established Plantings:*
       - *Annually: If intending to mulch **every** season, maintain a **One (1")** depth of mulch replenished annually*
       - *Bi-annually: If intending to mulch once **every two years**, or phasing-in mulch across larger properties, a **Two (2")** depth of mulch replenished bi-annually is recommended**
   - **Avoid cultivation (AKA: "turning mulch"). Remember, mulch encourages tender root growth due to its rich moisture content. Cultivation not only disrupts those tender roots; it also exposes them to the heat of the sun causing unnecessary stress. It also breaks any pre-emergent weed barrier that can result in weed infestations.*

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2. **Weed deterrent**: Bare soil is prone to weed seed germination. While weeds can still germinate in properly mulched areas, seedlings have a much harder time establishing tap roots as they grow through the mulch layer to contact the soil, thus making them much easier to control by mechanical or chemical means. Mulch also releases Nitrogen heat as it organically decays which can scorch tender seedling roots prevents sunlight from encouraging weed growth.
   - *Caution: Excessive mulch (> 3" depth) can equally lead to deterring & suffocation of favorable plant material root systems. Most all favorable plantings require a gas exchange of Oxygen and Carbon Dioxide. Decaying wood-fiber mulch releases heat in the form of Nitrogen which can scorch tender perennial and seasonal annual roots.*

   - *CPHort recommends considering min. wood-fiber mulch materials (blended compost, bark fines) for tender materials such as new perennials, groundcover, and seasonal annual beds.*

3. **Soil nourishment**: Organic mulch decomposes adding organic humus and Nitrogen to landscape planting beds, readily available for plant uptake and feeding. Organic humus benefits the soil composition which encourages favorable root growth.
   - *Caution: Organic mulch type and content is a very important consideration due to its intended decay and becoming part of the soil. Pigmented (AKA: Dyed) mulch will do the exact same thing, releasing whatever pigments were utilized to produce the mulch into the soil and taken up by the plants. Toxic paints used to dye mulch will contaminate the soil and lead to adverse effects on the surrounding plant materials.*

   - *CPHort recommends avoiding most* dyed/colored mulch materials to receive the full benefit of naturally decaying pure organics to nourish soils, avoiding potential toxic pigment contamination, and from an aesthetic approach, mulch should be a subtle backdrop to the color displays of perennials and shrubs. Colored mulch attracts the eye and can actually compete with the aesthetic appeal of the landscape. *Plant-friendly dyes labeled with Color-Safe Technology™ are the only recommended option for extending mulch color.*

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4. **Temperature regulation**: Organic mulch creates a natural cover for soils, preventing them from 'baking' in the pure sun without moisture.
   - *Caution: Excessive mulch can withhold too much heat, causing unnecessary stress to tender favorable plant roots.*

   - *Mulching in Winter? Due to mulch's insulation properties, CPHort recommends winter mulching of tender plants known to suffer from drastic temperature fluctuations over the winter months. Plants prone to such winter damage such as Roses, select Perennials, Japanese Maples, etc. can benefit greatly from winter mulching of 3"+ as a winter insulation blanket to ease the drastic freeze/thaw cycles. Note, winter mulch should be removed from the crowns/trunks of plants in Spring and distributed throughout the surrounding planting beds.*

5. **Erosion protection**: Organic mulch protects soils from rain and wind erosion and soil splashing.
   - *Caution: Mulch too can erode, but is much easier to set back in place and is preferred to erode vs. soil which can expose root systems to the elements.*

   - *Mulch won't stop excessive washout/erosion. Drainage systems, retaining systems (edging, walls) or erosion control plantings may be better solutions for problematic areas.*

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6. **Aesthetics**: Nothing says Spring quite like emerald green turf, properly edged, adjacent to organic mulch! Brown toned organic mulch is intended to be a backdrop of a aesthetically appealing landscape design.
   - *Caution: Colored mulches are often pigmented (AKA: Dyed) with potentially toxic chemicals. As the pigment flakes off, the result can be very distracting and unappealing. Further, most dyed mulches are comprised of non-organic materials such as recycled wood pallets that are not only deprived of nutrients, but often treated with other toxic wood preservatives. This is done in an effort to get the colored pigment to adhere to a surface that won't decompose, thus defeating all of the above listed benefits that organic mulches can offer.*

   - *CPHort recommends avoiding most* pigment dyed/colored mulch materials to receive the full benefit of natural decaying pure organics to nourish soils, avoiding potential toxic pigment contamination, and from an aesthetic approach, mulch should be a subtle backdrop to the color displays of perennials and shrubs, not a focal point. *Plant-friendly dyes labeled with Color-Safe Technology™ are the only recommended option for extending mulch color.*

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Organic Mulch Types

$$$ Hardwood Bark Fines: A fine textured mulch that retains moisture, moderates soil temperature, reduces weed growth and prevents frost heaving. Hardwood Bark Fines Mulch is the highest nutrient rich mulch that presents a softer look and adds beauty to the landscape all season long.

- **Recommended Use:** Rain Gardens, Perennials, Seasonal Annuals, Over-wintering

$ Leaf Mulch: High organic content for improving soil structure and decomposes much faster than wood content mulch. Leaf mulch is processed twice (double-ground) producing finely shredded material.

- **Recommended Use:** Flower/vegetable gardens and as a winter insulating mulch

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$$ Special Blend Mulch: Comprised of logs, leaves, branches; finely shredded with natural dark brown color.

- **Recommended Use:** Landscape planting beds, tree rings, and as a winter insulating mulch

$$$ Enhanced Special Blend Mulch: Comprised of logs, leaves, branches; finely shredded + Color-Safe Technology™ plant-friendly colorant, highly resistant to UV fading.

- **Recommended Use:** Landscape planting beds, tree rings, and as a winter insulating mulch

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$$$$ Brown Dyed* Mulch: Comprised of logs & branches; finely shredded + *Color-Safe Technology™ plant-friendly colorant, highly resistant to UV fading for season-long rich color.

- **Recommended Use:** Landscape planting beds, tree rings, and as a winter insulating mulch

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Application Methods

$$$ Manual Application ("Mulch Spreading")

Pros

- Ideal for congested landscapes (tight shrub/perennial plantings, late season mulching after perennials have emerged)
- Ideal for select winter mulch applications

Cons

- Requires significant labor and equipment resources (time = $)
- Difficult to control depth consistency (waste % = $)
- Requires staging of bulk piles throughout site for extended periods of time
- Must be performed during daylight hours interrupting vehicle & pedestrian traffic

Manual application finished result

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$$ Mechanical Application ("Mulch Blowing")

Pros

- Ideal for large projects where bulk material staging is limited
- May be performed overnight/after-hours to minimize vehicle & pedestrian traffic interruptions
- Efficient, with significantly less labor resources to complete (< time < $)
- Accurate & consistent depth throughout (< waste % < $)

Cons

- Requires windows to remain closed/pedestrians to remain clear due to airborne particle drift during application

Mechanical blown-in application finished result

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