

Composting & Vermiculture

What is composting?

Composting is the process of transforming kitchen scraps and yard waste into nutrient-rich soil (compost) by creating conditions for microbes to decompose materials.



What is vermiculture?

Vermiculture is the process of creating a soil amendment (castings) by harvesting earthworms (red wigglers, *Eisenia fetida*) in a bin and adding kitchen scraps and bedding material as needed.



How can I tell when compost is done?

Finished compost should be a similar consistency throughout with only a few identifiable materials like twigs, egg shell remains, or big seeds. It will be dark in color and smell earthy. Usually compost will be ready to use within 6 months to 1 year depending on the method. Be sure you let the compost cure for at least 1 year before applying it to edible gardens.

What can I use my finished compost/ castings for?

Since compost/castings are more similar to fertilizer, a little goes a long way. You do not want to burn your plants with too many nutrients.

In the yard, top-dress the existing soil 1 - 3".



In potted plants, mix 1 part compost/castings to 3 parts potting soil.



In a vegetable garden, add 1 - 3" of compost/ castings over the soil.



City of Laredo
Environmental Services

Composting & Vermiculture

Introduction



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What You Need

“Greens”

Materials high in nitrogen and sometimes green in color, including fruits, vegetables, coffee grounds, tea leaves, and grass clippings.



“Browns”

Materials high in carbon, usually brown in color, including dried leaves, cardboard, newspaper, and wood chips. You need 3x more browns than greens.



Oxygen

Microbes that decompose materials need oxygen to survive. Allow access to oxygen by creating open piles, lining with chicken wire/wooden pallets, or using bins with ventilation.



Water

Microbes that decompose materials also need water to survive. The consistency of your compost should be like that of a wrung-out sponge, damp but not soaking wet.



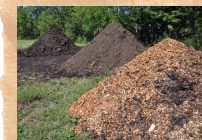
5 Steps

- 1 Start with a thick layer of damp browns.** 2 - 4 layers of slightly moist cardboard is an ideal material for the bottom of your bin/pile.
 **Tip:** tear or shred your browns for quicker decomposition.
- 2 Use a small to medium sized container for storing greens in between trips to your bin/pile.** Reuse a plastic food container and keep it covered to prevent smells or pests.
 **Tip:** placing your greens in the fridge/freezer will help prevent them from smelling or rotting before they get to your bin/pile.
- 3 Once you have more than a handful of “greens”, dump them in the center of your bin/pile.** Always cover greens with 3x more browns.
- 4 Always end with browns.** Imagine you're layering your bin/pile like a lasagna: browns, greens, and browns. Always end with browns as they help prevent pests and smells.
- 5 Add water to your bin/pile as necessary to maintain a slightly moist consistency.**
 **Tip:** rinse out the container for your greens in between uses and empty the graywater over your browns.

Methods

Composting

Open Pile



Screened



Tumbler



Windrow



Vermiculture



Red wigglers (*Eisenia fetida*)

Worm Tower (Indoors)



DIY Bin (Indoors)



Underground Bin (Outdoors)



Worm Bag (Indoors)

