Worm Composting

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It's easy and fun

Live in an apartment, mobile home, or RV? Have a home with a small yard? Don't have time for a three cubic foot compost bin or the strength or energy to turn the compost every couple of weeks? Worm composting or vermicomposting could be for you.

Worms and their bins are great for small spaces inside the home under the kitchen sink, in a basement, utility room, laundry room or the garage. A small shady area on your porch or yard could also work. A suitable spot for your bin out of the direct light and sheltered from strong winds will help keep the bin within a temperature range of 59 - 77° Fahrenheit.

Worm composting requires a bin. Plastic bins can be purchased online or at agricultural supply stores and come in several shapes and sizes. Vertical bins encourage the worms to move upward, leaving the castings ready to use in lower bins.

You can also build a worm bin to suit your chosen location. Many worm bin plans can be found online.

Worms are clean and have very little scent. They are cool and slippery to the touch, they don't bite, and their castings smell slightly earthy, like humus.

Worms prefer darkness and need air to breath, a steady temperature, food, and enough moisture in the box to keep their skin moist. They spend most of their time in the vegetable scraps and bedding.

Worms aren't good swimmers and can drown if there is excess fluid pooled in the bottom of the worm bin. Bins that are designed to self-drain allow excess water to drain into a lower level, thus keeping the moisture level at a constant and healthy level. This drainage, known as worm "tea." is composed of worm castings diluted with water. It can be used half-strength to water your indoor plants, or used full-strength on outdoor plants.

Compost worms are part of the biological family Lumbricidae. This family includes hundreds of species. Within this family each worm species has a two-word italicized Latin name. The most frequently recommended worms for composting in the Pacific Northwest are *Eisenia fetida, Eisenia andrei, and Lumbricus rubellus, because these* species live in the top few inches of the soil under dead leaf litter, which best matches the worm bin environment.

WSU Skagit County Master Gardeners program maintains a worm box in the WSU Discovery Garden. *Photo by Carla Glassman / WSU Skagit County Master Gardeners.*

You will need about a pound of worms for each cubic foot of worm bin. For example, if your bin is two feet long by two feet wide by one foot tall, this works out to four cubic feet and four pounds of worms. Often you can get compost worms from a friend or neighbor who already has a worm bin. You can also purchase worms via the Internet.

If you purchase your worms you will find that most compost worms are sold under names such as “red worms” or “red wigglers” or “night crawlers.” These names do not give you accurate information about the worm’s temperature tolerance or habitat preference.

They are also sold by number of worms rather than weight of worms. Before you order worms, contact the worm farmer and request the biological name of the worms, the weight, and number of worms they are selling.

Worms like to eat fruit, vegetable scraps, coffee grounds with paper filters, tea leaves with or without bags, dried ground egg shells, grains, pasta, crackers, and bread.

Add food to the worm bin by lifting the bedding material and placing the food under it. The food may be either whole or chopped. The new food may be mixed with the worm castings and previous food or placed on top. The worms should not be fed meat, fish, or dairy products including cheese, oils, fats, litter box material, any kind of pet stool or urine, or non-biodegradable materials, including biodegradable plastic bags.

The worm bin bedding can be made up of a combination of torn paper bags, shredded office paper, torn or shredded mail, torn newspaper (excluding colored high-shine paper), cardboard, sawdust, composted animal manure from chickens, rabbits, ducks, or goats, shredded drying leaves, straw or dried grass clippings.

You don’t have to make a mixture of these items; one or two works well as long as the bedding is coarse enough to hold moisture and can be fluffed up to provide air flow. The bedding covers the food scraps providing darkness and moisture for the worms while they eat.

Moisten dry bedding material before placing it in the bin. Use one part bedding material to three parts water by weight. Weigh your dry bedding material first, then weigh the water separately. Two pounds of bedding material needs six pounds of water. Place bedding in an appropriate container, add water and mix. Allow the mixture to rest and absorb the water before adding it to the worm bin.

Depending on conditions (temperature, amount of material added, number of worms, size of bin, etc.), you could expect to use the castings anywhere from one to six months.

RESOURCES:

- *Vermicomposting: The Basics*. Richard Myers. National Sustainable Agriculture Information Service. October 2013. https://attra.ncat.org/product/vermicomposting-the-basics/
- *Washington State Compost Educator’s Guide*. Holly Wescott, Andy Bary, Craig Cogger, Chery Sullivan, and Andrew Mack. Graphic Design. April 2010.

- *Worms Eat My Garbage*. Mary Applehof. Second edition. Flower Press.1997.
- **“**Composting with Red Worms.” WSU Whatcom County. http://whatcom.wsu.edu/ag/compost/Redwormsedit.htm
- **“**Cheap and Easy Worm Bin.” WSU Whatcom County. http://www.whatcom.wsu.edu/ag/compost/easywormbin.htm
- “Composting Methods and Bins.” Seattle Tilth. http://www.seattletilth.org
- “Worm Composting Basics.” Cornell Composting. http://compost.css.cornell.edu/worms/basics.html

Note: some hyperlinks in this article have been updated since its initial publication.