

Make Compost with Worms

By Terry Brite DelValle

Vermicomposting is the process of using worms and microorganisms to break down vegetable scraps into rich compost. One pound of worms can turn 65 pounds of trash into compost in 110 days.

Select a Location: This type of worm composting can be done either inside or outside if the temperatures are not extreme. They are the perfect house pets since ideal temperatures are from 60 to 80°F, however they will tolerate a range from 40 to 90°F. They can be kept outside in the garage, porch area or under a shade tree if temperatures are in the acceptable range. Odors are not a problem if you decide to compost inside the home.

Worm Container: You can go online and purchase a worm bin but it's much cheaper to make your own. The size of the bin is dictated by how much food scraps are generated each week. Two people might produce 3 pounds of food scraps per week versus a family of four to six could end up with 6 pounds. A bin measuring 2 feet wide, 2 feet long by 8 inches deep will be adequate for a family of two. For the larger family, select a 2 foot long by 3 foot wide bin. An 18 gallon plastic storage container usually works great. Avoid



using a clear container because the worms do not like light. Another option is to use an inexpensive dishpan and cover it with black weed cloth tied off with an elastic band. With the smaller containers, you will be limited as to how much food can be composted.

The worms need aeration so one option is to drill four holes four inches from the top of the bin. Others drill holes on the bottom as well and collect compost tea which is used as a fertilizer. Secure the holes by covering them with small pieces of screen glued down with duct tape on the inside of the bin. Another method is to use black weed cloth covering the top which should provide adequate oxygen. Use a lid or the weed cloth over the top to block the light. If outside, use a secure plastic cover or an adventurous animal may help themselves to the worms.



Prepare the bed: At the base of the bin, add a few handfuls of soil or sandy material and then add the bedding material. Worms need bedding material to burrow into. Use a light fluffy material like shredded newspaper, paper bags, computer paper or cardboard. Don't use glossy pages from magazines or ads. Shredded leaves or peatmoss can also be added. Moisten the bedding material but keep the material light and fluffy. Add about four to six pounds of bedding for a 2 by 2 foot bin or add until the

bin is about $\frac{1}{2}$ to $\frac{3}{4}$ full. Over time, the worms will feed on the bedding so plan to replenish in a few months. As the bedding material dries out, rewet with a mister. Over time the material gets compressed so periodically fluff it up to increase air space.

Worms: Make sure you get the right kind of worms. Purchase redworms or “wigglers” (*Eisenia foetida*), not night crawlers. Worms can be purchased online or from reliable bait shops. One pound of worms can be added to a 2 by 2 foot bin. Place worms on top of the bedding and they will work their way under the moist paper.



Food for the worms: Worms like plant derived food so potato peels, lettuce, banana peels, apple cores, bread, crushed egg shells, tea or coffee grounds, and coffee filters are all good food sources. Avoid adding too much of a particular item that would affect the pH like eggs, citrus peels or coffee grounds. Just like in traditional compost piles, don't add animal products or grease to the bin. To add food, open up a shallow hole in the bedding, place food in the hole and cover with an inch or more of the bedding. Put the food in different places each time you feed them. Determine how often to feed them by checking the food reserves.



Some folks chop up or blend the material to speed up the process but that's not necessary; the worms will break down the product for you. There will likely be other small critters in your bin along with the worms so don't be alarmed if you find pill bugs or springtails. Mine often has small seedlings that germinate from peppers or other plant seeds but this too serves as food for the worms.

Harvesting the Worms and Compost: Worms can be used for fishing and the worm castings for your plants. The easiest way to harvest worm castings is to push all the material over to one side of the bin and add food and fresh bedding to the other side. After a few weeks, the red wigglers will migrate over to the new food source so the old compost can be harvested. Look for worm eggs which are about the size of a match head, lemon-shaped, shiny, and light brown in color. Each egg contains between 2 and 20 baby worms so put these back in the bin.

Another method is to dump the contents out on a plastic sheet in full sun. After 20 minutes, scrap away the top layer of compost and repeat the process after another 20 minutes. The worms will move down to the bottom to escape the light. Place the worms plus some of the castings back in the bin and replace the bedding.

Using Worm Castings: Use the worm castings by mixing them into the soil or sprinkle around plants as a top dressing. Make your own potting soil by mixing $\frac{1}{4}$ part worm castings, $\frac{1}{4}$ part perlite, $\frac{1}{4}$ part peat and $\frac{1}{4}$ part builder sand. Another popular use is to make a compost tea for the plants. Put two tablespoons of castings in a cloth baggie, place the baggie in a quart or gallon of water and allow it to sit for a day. Use this to water plants or as a foliar nutrient spray.

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