



Composting with Worms

Worm composting (or vermicomposting) is a natural and efficient way to recycle your organic kitchen scraps. And it sure beats plowing through knee-high snowdrifts to the compost pile in the middle of winter! Worm bins really require very little in the way of maintenance and care. You can keep them anywhere the temperature will not go down to freezing such as a basement, insulated garage or under the kitchen sink. The best temperature range is 55-77 degrees Fahrenheit.

This is a great project to do with kids; it's easy to make compost using worms as long as you have the right container, bedding material and the right worms. And the finished product, consisting mostly of worm castings, can be used with perlite to make a houseplant potting mix, added to planting holes when transplanting seedlings, or simply incorporated into flower or vegetable beds.

You can either make your worm bin yourself or order it from a number of different sources (listed later). Common materials for a do-it-yourself project are dark-colored plastic storage boxes and wooden boxes built from exterior-grade plywood. A basic design would be 1 foot high, 2 feet deep and 3 feet wide with aeration holes in the bottom. A simple cover can be made from a sheet of black plastic. A box this size will accommodate about 6 pounds of kitchen scraps a week (the average amount from a family of 4-6). You will need to keep the bin on a tray elevated at least an inch off the ground.

The bottom of your bin will need to be lined with an 8 inch layer of bedding material. Cellulose-based materials like shredded newspaper, corrugated cardboard or coarse sawdust are best to start with. Tear enough newspaper or corrugated cardboard into 1 to 2 inch-wide strips for a layer 2 inches thick. Before putting bedding material into the bin, dampen it with lukewarm water until it has the same moisture content as a wrung-out sponge. Adding a second layer of peat moss alone or combined with garden soil or leaf mold to the bedding will provide microorganisms for the composting process and grit for the worms' gizzards. Then add the worms, another 2 inches of peat moss, and finally a last layer of newspaper. A thick top layer of newspaper will keep fruit flies from burrowing down to the food layer. Check your bedding at least once a week to make sure it stays damp. Add water if necessary by misting with a spray bottle.

After spreading the bedding over the bottom of the bin, you're ready to add worms! What worms do you buy? Of the 17 species available in North America, you want redworms or red wigglers. You can buy them at a bait shop or through mail order. You want redworms because they can process large amounts of kitchen scraps, don't mind confined spaces, reproduce well in culture and tolerate a wide range of temperatures. For the bin described above, you'll need about 2 pounds (about \$20-\$30). You'll get between 600 and 1,200 worms per pound. They will be red and from 2 to 4 inches long. Put your worms on top of the bedding and watch them quickly burrow to escape light.

Now comes the fun part, feeding your worms. Put leftover kitchen scraps into the bin: vegetables, fruit rinds (no citrus) and peelings are great. Bread, coffee grounds, cereal, crushed eggshells, pasta or rice and houseplant clippings are also okay. Food should be cut into small pieces and buried in the bedding every few days. By covering food waste with a few inches of bedding, you avoid odors and pests (like fruit flies). Rotating the burial places in the bin will provide your worms with a balanced diet of kitchen scraps and bedding. As with outdoor compost, you want to stay away from meat, bones, oils and dairy products.

After several months of feeding the worms, most of the bedding should be gone and a dark, crumbly soil-looking material should be in its place. Now it's time to harvest. Do this by pushing the nearly finished compost to one side of the bin. Put fresh moistened bedding with some fresh food waste in the vacant side. Over the next few weeks the worms will migrate to the new bedding, and you can harvest. Take the finished compost out, and put fresh bedding in, starting the cycle all over again.

If you are interested in more detailed information on worm composting, you can read the book "Worms Eat My Garbage" by Mary Appelhof. The following are sources of red worms: Joan's Famous Composting Worms, PO Box 387, Henniker, NH 03242; Red Worms for a Green Earth, 380 Rollins Rd, Rollinsford, NH 03869; Gardener's Supply, 128 Intervale Road, Burlington, VT 05041; the Cape Cod Worm Farm, 30 Center Avenue, Buzzards Bay, MA 02532; or Berwick Worm Farm, 264 Pine Hill Road, Berwick, Maine 03901.

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