



Vermicomposting: Indoor Container Composting

Worms play an important role in decomposing organic waste into compost. Worms eat plant remains and soil, and convert them into nutrient rich castings. One worm eats up to its body weight each day! The worms best suited to vermicomposting are redworms — they thrive in warm, decaying organic matter. Redworms need to live in a bin—the bin could be a Styrofoam cooler, plastic bin with lid or a wooden box. The worms need bedding of shredded black and white newspaper to burrow into and provide a place where you will bury kitchen scraps. Locate your bin where the temperature remains above 55 and below 78 degrees F.

Worm castings contain nitrogen and other nutrients necessary for plant growth. When added to soil, worm compost (a mixture of castings, decomposing organic material and microorganisms) improves nutrient availability, soil structure and drainage. Worms in a small worm bin can produce 4 pounds of castings in one month — just from kitchen waste. At home, school or work, vermicomposting is easy and takes just 10 to 15 minutes per week.

Vermicomposting has many benefits. Every four months, the worm bin will be filled with a nutrient -rich soil conditioner — for free! Worms composting kitchen waste cause fewer odors and attract fewer pests than garbage in the wastebasket. Vermicomposting can be done year round, even in an apartment, because the worm composting bin works indoors as well as an outdoor compost bin at temperatures above freezing. A worm composting bin is inexpensive and requires very little space, labor or maintenance. Recycling kitchen scraps by composting reduces garbage sent to landfills. Vermicomposting saves landfill space, does not pollute and creates a valuable product.

Setting up a Redworm Vermicomposting Bin System

It is easy to make a worm composting bin. This do-it-yourself system will recycle 3 to 4 pounds of food waste per week — the average kitchen waste for a small household. If you prefer, there are commercially made bins available from garden supply companies. To recycle a larger amount of kitchen waste, increase the bin size, amount of bedding and water and the amount of worms.

Supplies:

1 pound redworms (~1000 worms) preferable. Avoid earthworms and worms from fishing stores.

Shallow box about 2 feet by 2 feet by 8 inches (Styrofoam cooler, wooden box, plastic bin)

Light-weight screening to cover air holes

4 pounds of dry bedding (shredded black and white newspaper, peat moss or decaying leaves)

1½ to 2 gallons water

Rubber gloves for handling compost

Spray bottle to add moisture as needed

1. Use a shallow box with a lid. Make 10 holes ½ inch in diameter in the bottom of the bin. Place bin on a plastic tray. Make 3 to 4 holes on each side of the bin and cover them with screen.
2. Find a good location: (a) indoors such as garage, basement, kitchen or (b) outdoors in warm weather but not in direct sunlight. The best temperature range is 55 to 77 degrees F.
3. Place the bedding in a bucket and add enough water to dampen it to feel of a wrung out sponge.
4. Place the bedding in the worm bin and add the worms. Leave the lid off for an hour. The worms will work themselves down into the bedding and away from light.
5. Add vegetable and fruit kitchen scraps. Dig a hole in the bedding, place scraps in the hole and cover the hole with bedding. Add to a different area or quadrant of the bin each time. Kitchen scraps may be added daily, but once or twice a week is fine, too. Place a sheet of plastic over the bedding to help retain moisture in the system. If flies are a problem, place some bedding over the scraps.

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- The worms eat the garbage and bedding and turn them into a soil-like material. In 3 to 4 months, the bedding begins to look like rich soil. Push all the bedding, kitchen scraps and worms to one side of the bin, and add new dampened bedding to the empty side. Start adding kitchen scraps to the new bedding only. Within one month the worms will crawl over to the new bedding and scraps, and there will be finished compost on the “old” side. Remove this compost and replace it with new, dampened bedding. Now, add new kitchen scraps to both sides. In 2 to 3 months, repeat the process.

Worm Foods

Chop vegetable and fruit scraps into small pieces. Feed about two times per week.

Suitable Foods	Do Not Feed Worms
Fruit and vegetable scraps	Watermelon rind, citrus, onions and garlic
Breads and grains	Bananas due to toxic chemicals on peel
Coffee grinds and filters	Meat, fish, bones, cheese, butter, greasy foods
Tea bags	Pet waste
Egg shells	Grass clippings and yard waste with chemicals
Decaying leaves	Metal, plastic, rubber or glass

Troubleshooting:

- Odor is due to the overabundance of wet waste from nitrogen combining with hydrogen to form ammonia. To neutralize, add shredded paper to absorb extra moisture and stop feeding until food waste is consumed. Give worms only enough food to satisfy their needs for a few days, and only food items suited to worms. Mix up the bedding to increase air spaces.
- Fruit or vinegar flies may get into the bin. Cut down feeding rate. Bury food waste in the bedding. Cover the bedding with moist newspaper or a dark plastic sheet. Vinegar flies do not harm the worms.

Uses:

- mix worm compost into your garden soil
- top dress lawn to a depth of ¼ inch or trees and shrubs to a depth of about ½ inch
- mix 1 part dried worm castings with potting soil
- use it around garden plants

Caution:

Pure worm compost may contain high concentrations of salts. Do not use worm castings for sprouting tender seeds. Do not mix it with potting soil for your houseplants.

Sources of redworms:

New York Worms www.nyworms.com/redworms

Redworms 4 Sale www.redworms4sale.com

Bin Suppliers:

Gardener’s Supply Company www.gardeners.com

All Things Organic www.allthingsorganic.com

Worms Wrangler.Com www.wormswrangler.com

MasterGardening.Com www.mastergardening.com

Topline Whole Distributing Company www.topline-2000.com

CompostBins.com www.compostbins.com

Sources of information:

Appelhof, Mary [Worms Eat My Garbage](#)

Barrett, Thomas [Harnessing the Earthworm](#)

Campbell, Stu [Let it Rot: The Gardener’s Guide to Composting](#)

City of Sacramento, CA, Department of Parks and Recreation, [How to Vermicompost at Home or Work.](#)

<http://www.cityofsacramento.org/parksandrecreation/pdf/vermicompost-01-08-09.pdf>

Nancarrow, Loren [The Worm Book: The Complete Guide To Worms in Your Garden](#)

Noyes, Nick [Easy Composters You Can Build](#)

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