

HOW TO: VERMICOMPOST

SIMPLE PROJECTS FOR CONSERVATION

Vermicomposting is the process of recycling food waste by feeding it to worms in a self-contained bin. The waste generated by the worms—called castings—combines with decomposed newspaper and other types of bedding to create rich compost you can use in your garden. Because a worm will eat its weight in table scraps, vermicomposting is a triple win: You recycle waste; you produce organic fertilizer for house and garden plants; and, you raise worms for fishing.

1. The Bin

Find wooden, metal, or plastic bins with fitted lids. To build a plywood bin like the one illustrated here, get instructions online at <http://www.solidwaste.org/comworms.htm>. Be sure not to use wood treated with preservatives. For plastic or metal containers, scrub with detergent and hot water before use.

The size of the bin depends on how much food waste you generate. Typically, one cubic foot per pound of weekly scraps should suffice. For an average family of three to six, a bin that's 3 feet long, 2 feet wide, and 8 to 18 inches deep is about right.

Drill a dozen or so 1/4-inch drainage holes in the bottom of the bin to promote air circulation. For more circulation, place the bin atop blocks and lay a plastic sheet or tray underneath to catch drips.

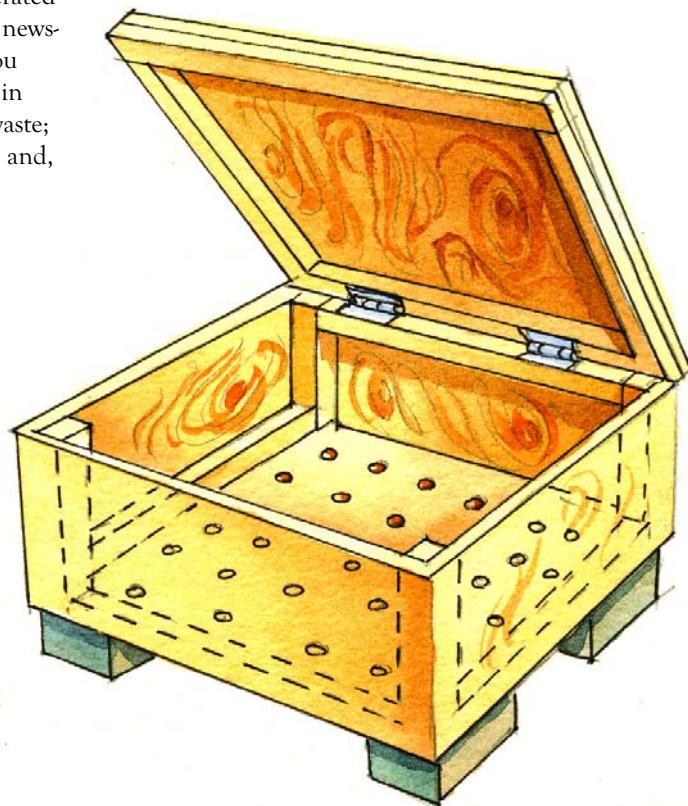
2. The Bedding

Bedding gives the worms a place to do their thing, but it also holds moisture and contains the food waste. Worms will even consume some of the bedding.

Bedding material must be biodegradable and light enough to allow air exchange. It must also be free of chemicals or pesticides. Cardboard, newspaper, or computer paper shredded into thin strips work well; glossy or colored paper does not.

Leaves may be used, but only if they are free of insects, road salts, and chemicals.

Moisten the bedding with water, and then wring it out before adding it to the bin. For even more worm-friendly bedding, add some peat moss, sterilized soil or sand, crushed eggshells, or ground limestone.



3. The Worms

Don't get just any worms—nightcrawlers and other garden worms fare poorly in bins. Red worms (*Eisenia foetida*) reproduce quickly and eat voraciously, making them the worm of choice for vermicomposting. You can buy red worms from growers, bait shops, garden centers, or through the mail at an average cost of \$20 per pound.

Place about one pound of worms per pound of daily food scraps. A breeding worm can hatch several youngsters that will mature within two or three months, so the population will multiply as long as there are enough food scraps.

Worms need moisture, ventilation, and a cool temperature of about 55-77 degrees Fahrenheit. Locate the bin accordingly.

Please note: Earthworms are not native in parts of the country, particularly northern states, and some natural resource managers are concerned that worms released in hardwood forests could disrupt the balance of the soil, causing loss of tree seedlings, wildflowers, and ferns. Therefore, do not dump live worms in the woods or the trash. To kill stray worms in compost, you can freeze the compost for at least one week.



4. The Food Scraps

Worms are like goats—they'll eat just about anything. Keep a container by the kitchen sink to collect discards. The best choices for vermicomposting are fruit and vegetable scraps. Rinse banana peels to avoid fruit flies. Crushed eggshells add grit and calcium. Leftover pasta, old bread, coffee grinds, and tea leaves are all fine, too. Don't use meat or dairy products—they'll create bad odors.

Bury the food scraps in the bedding, using a different area each time. Every three to six months, move the resulting compost to one side of the bin and add new bedding to the empty half. Then bury new food waste in the new bedding only. The worms will follow the scraps, and once they've moved over, you can harvest the compost.



5. The Compost

Worm compost is more concentrated than other compost, thanks to the worms' hardworking digestive systems. Store harvested compost in a plastic bag until you're ready to use it. For houseplants, you can mix the compost with potting soil or spread a layer of it on top. In the garden, you can use it as mulch or mix it into the soil. Finely screened compost can be combined with potting mixes for seeds or sprinkled onto the lawn as a conditioner.