

## Get squiggly with worm composting

### Worms turn kitchen scraps into valuable, sustainable soil amendment

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Wondering how you can best deal with kitchen waste when you don't have a compost pile? Looking to enrich your soil without buying costly fertilizer? Or are you looking for a particularly squirmy kind of pet?

The answer to all three questions: earthworms.

OK, maybe the last one is a bit facetious. But like any other living thing, worms are something that can keep you company — and also give you the gift of better garden soil. Worm keeper Juli Hofmann of Marina compares them to any easy-care animal: "It's kind of like having a goldfish," she said, in terms of how much care the worms need.

Gardeners and people living sustainably have discovered the myriad benefits of keeping a worm bin in recent years. Not only do worms readily eat your kitchen waste, thereby keeping it out of the landfill, they produce one of the most sought-after substances for great gardens — worm castings, a potent fertilizer and soil conditioner.

The Monterey Regional Waste Management District regularly holds composting workshops, and several times a year, sessions on worm composting, also known as vermiculture or vermicomposting. Interest in worm composting is definitely on the rise. "The vermiculture workshops have been incredibly popular," said MRWMD education coordinator Kimberle Herring, who organizes the composting classes.

The ingredients are simple: worms, bedding material, a light-blocking bin with a lid, and non-meat food scraps. Place your kitchen waste into the bin once or twice a week; then occasionally remove the castings for use in your garden. "It's a great way for people to produce a very effective soil amendment," said Herring. "It's also great for people who don't have the space, time or material for a regular compost pile." Since with worms, composting can be contained to a portable bin, it can work for just about anyone — people in apartments, condos, or tiny yards.

Worms are quite effective at eliminating vegetable food scraps. A shocking amount of food and trimmings go into the garbage, when instead they could be transformed into garden compost. "Eighty percent of organic waste goes into the landfill," said Richard Bradley, who leads the vermiculture workshops for MRWMD.

Bradley comes from Hollister to lead the worm workshops, and is the perfect teacher for the class. Bradley, the owner of the Harvesting Solutions worm farm, said vermiculture is the ideal way to reduce your garbage output. Also, he points out, worm castings are the original natural fertilizer, and still one of the best. "Chemicals and synthetic fertilizers are doing more harm than good," he said. "We don't know what the long-term effects of those will be."

When earthworms eat organic matter, it moves through their alimentary canal and is transformed into a substance boosted with beneficial bacteria and enzymes that promote plant health, in addition to containing humus and water-soluble plant nutrients.



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Unlike other fertilizers, worm castings have some unique properties. They are odorless and have a neutral pH, and can be applied to plants without fear of fertilizer burn. Also, the nutrients in them are immediately available to the plant.

Worm castings can be sprinkled around plants, mixed into soil, used to start seeds, or mixed with water to make "worm tea," a potent liquid fertilizer. Castings also improve soil structure. Herring points out, whether one's soil is clay or sand, also helping plants grow stronger. "Castings are amazing," said Hofmann, who started worm composting after volunteering at the MRWMD workshops. "They are the greatest thing since sliced bread."

Hofmann, an avid home gardener and member of the Marina Tree and Garden Club, said that it doesn't take much time to take care of her worms. She has her bin outside in a shady spot — too much heat will kill the critters — and she checks on them when putting in her kitchen scraps once or twice a week.

The most important factors are keeping the worm bedding slightly moist, not dry and not too wet, and that the worms aren't too hot or too cold, and that they have enough to eat. Worm bins can be kept indoors or out; another workshop instructor, Sandra Forman, keeps hers inside. If kept outside, worms need protection from freezing temperatures, direct sun and rain.

Worm bins are available through MRWMD or through Bradley, who sells them on his website; they're also easily fashioned from a plastic tub with a lid, or a wooden box, as long as they keep light out. The bin must have holes for drainage below and aeration holes, because worms need air to survive.

To handle food waste for a four-person family, a bin of 12 to 20 gallons will do. The worms need a bedding material, such as shredded paper, wood chips or decaying leaves; a couple of handfuls of soil should be added to provide grit for the worms' digestive tracts.

Hofmann said her worms don't eat as much during the winter, but perk up when the weather warms; she harvests castings every few months for her garden. It's been easy, she said. Bradley said worm composting works well with just a little bit of effort. One of the most common mistakes, he said, is giving the worms more than they can eat — when that happens, food can decompose and get smelly. However, he notes, "They can eat their own weight in 48 hours." And that's a good thing where garbage is concerned.

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### **All about worms**

Worm composting does take a little study and a little time. A good beginner's manual on vermiculture is the classic "Worms Eat My Garbage: How to Set Up and Maintain a Worm Composting System," written by Mary Appelhof (Flower Press, \$12.95).

There is also a wealth of information available at Richard Bradley's Harvesting Solutions website ([www.harvestingsolutions.com](http://www.harvestingsolutions.com)). Worm bins can also be ordered through the site, as well as worm castings and other products.

Worm bins are also available for sale at Monterey Regional Waste Management District and at some local nurseries. You can also make your own, or repurpose them from something else, such as an old dresser drawer.

You'll also have to buy worms, which cost around \$20 a pound. The best worms for vermiculture are red wigglers (*Eisenia fetida*) or redworms (*Lumbricus rubellus*). They can be ordered through a variety of sources, including [www.calrecycle.ca.gov/Organics/Worms](http://www.calrecycle.ca.gov/Organics/Worms), [www.vierraswormfarm.com](http://www.vierraswormfarm.com) or [www.happydranch.com](http://www.happydranch.com).

Worms can also be picked up from Bradley by calling 902-5536, or through Seaside Garden Center, 393-0400 (ask for Shandra).

— *Kathy Nichols*

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