

Using Your Compost

Worm compost is more concentrated than most other composts because of the way worms digest food waste: they break food down in their digestive tracts into simple, readily-available plant nutrients. Use the castings sparingly for best results.

Mulching and Amending Soil

To mulch with worm compost, apply a one-inch layer to the soil around plants. Be sure the worm compost is not piled against plant stems. To amend soil, worm compost can be spread one-half to two inches thick over garden soil and mixed in before planting, or mixed into the bottom of seeding trenches or transplanting holes.

For House-plants

Sprinkle worm compost around the base of plants to fertilize. Each time you water, plant nutrients will seep into the soil.

In Potting Mixes

For healthy seedlings, mix one part worm compost with three parts potting mix or three parts sand and soil combined. Pearl-ite and vermiculite are also good ingredients to add.

For More Information

Books

Worms Eat My Garbage, 1982, or *Worms Eat Our Garbage*, 1993 (Classroom activities).
Mary Applehof, Flower Press, Kalamazoo, MI, 100 pp.

Let It Rot! The Home Gardeners Guide to Composting, 1975. Stu Campbell, Garden Way Publishing, Pownal, VT, 144 pp.

The Rodale Book of Composting, 1992, Grace Gershuny, St. Martins Press, New York, NY, 278 pp.

Educational Assistance

Oklahoma Department of Environmental Quality,
Environmental Education Office, 707 North Robinson,
Oklahoma City, OK 73102, 405/702-5100

Central Oklahoma Metropolitan Environmental
Association

Canadian County Solid Waste Disposal Authority

TROUBLESHOOTING

Symptoms	Problems	Solutions
Worms are dying	Not enough food	Bury food into bedding
	Too dry	Moisten until slightly damp
	Too wet	Add bedding
	Too hot	Put in shade
	Bedding is eaten	Harvest worm compost, add fresh bedding
Bin smells rotten and/or attracts flies	Not enough air circulation (too wet)	Add dry bedding under and over worms, do not feed for 2 weeks
	Non-compostables present	Remove meat, pet feces, etc.
	Food exposed	Secure lid, cover food scraps with bedding, cover worms and bedding with a sheet of plastic or carpet
Cat thinks bin is a litter box	No lid on bin	Remove cat feces, keep lid on bin



OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

...for a clean, attractive, prosperous Oklahoma

Oklahoma Department of Environmental Quality
Land Protection Division
707 North Robinson,
Oklahoma City, Oklahoma 73102

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WORM COMPOSTING



Let Worms Eat Your Garbage!

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Let worms eat your garbage! They will happily turn it into some of the best fertilizer on Earth - worm compost, otherwise known as worm castings or vermicompost. Vermicompost is a fascinating, fun and easy way to recycle your organic kitchen wastes. It requires very little work, produces no offensive odors and helps plants thrive. Composting with worms saves money on garbage bills, improves the fertility and water-holding capacity of garden soil, benefits the environment by recycling valuable organic materials, and helps solve the crisis of overflowing landfills.

Getting Started

Only a few things are needed to make good worm compost: a bin, bedding, water, worms and worm food.



Worm Bins

Your bin only needs to be 8"-14" deep, since compost worms are surface feeders. You can use a wash tub, a dish pan, a used shipping crate, or a commercial worm bin. Just be sure your bin has a lid to keep out flies and rodents, and holes in the bottom (1/4 inch or smaller) for ventilation and drainage. The rule of thumb for bin size is two feet of surface area per person, or one square foot of surface area per pound of food wastes generated each week.



Bedding Materials

The compost worm's natural habitat is in piles of fallen leaves or manure above the soil surface. These materials can be used for bedding, as can partially finished compost or chopped straw. Black and white newspaper is the most readily available and easy-to-use bedding material. Tear it into strips about one inch wide and moisten them to the point as damp as a wrung-out sponge. Cow or horse manure can be used to lighten bedding and absorb excess moisture. A handful or two of soil, ground limestone or well-crushed egg shells every few months are good for providing grit and calcium. Fill your bin with bedding, water until evenly damp, toss in a few handfuls of soil, and you're ready to add the worms and food. Over time, the bedding and food are eaten by the worms and turned into dark, crumbly vermicompost.



Where to Put Your Worm Bin

Place your bin in the shade. Worms, like humans, prefer moderate temperatures, between 55 and 75 degrees Fahrenheit.

Good Spots for Your Worm Bin

- Kitchen Corner
- Garage
- Basement
- Along outside wall of house
- Patio or deck
- Laundry room
- Shed

Worms

The best kind of worms for composting are "red worms," or "red wigglers." They are often found in old compost piles, but are different from the earthworms you normally find in the ground. Their scientific names are Eisenia foetida and Lumbricus rubellus. These worms have a big appetite, reproduce quickly, and thrive in confinement. They can eat more than their own weight in food everyday! Common earthworms and nightcrawlers don't survive well in bins, since they normally live under the soil surface. When purchasing red worms, one pound is all you need to get started.

Harvesting Your Compost

After you have fed your worms for three to six months, you may notice the bedding has been eaten, and you can begin harvesting the brown, crumbly worm compost (castings). Harvesting the compost and adding fresh bedding at least twice a year is necessary to keep your worms healthy. Here are a few simple methods for collecting your finished worm compost.

Method #1 Move the contents of your worm bin to one side, place fresh bedding in the empty space and bury your food waste there for a month or so. Harvest the other side after the worms have migrated to the new food and bedding.

Method #2 Remove one-third to one-half of the contents of your bin, worms and all, and add the worm compost to your garden soil. Add fresh bedding and food to your bin.

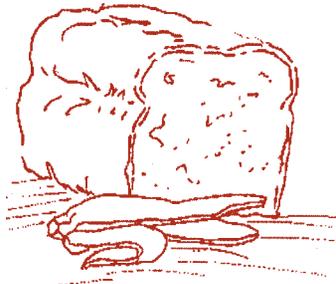
Method #3 Spread a sheet of plastic out under a bright light or in the sun. Dump the contents of the worm box and build a few cone shaped piles on the sheet. Gently remove the top layer of each pile until you see worms. To escape the light, the worms will dig deeper into the pile. After repeating the process every 10 minutes or so for an hour, you will be left with a wiggling pile of worms. Save your castings and return the worms to their bin and fresh bedding immediately.

FEEDING YOUR WORMS

Worms like to eat many of the same things we eat, only they aren't as picky. Stale bread, apple cores, orange peels, lettuce trimmings, coffee grounds, and non-greasy leftovers are just some of the foods we usually discard that worms eat.

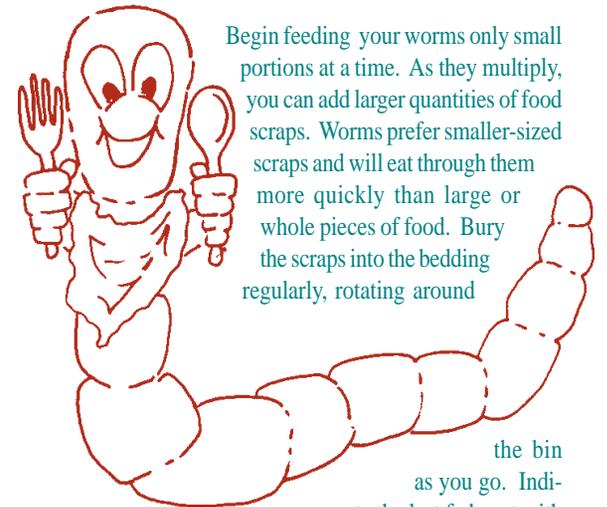
Do Feed

- Vegetable scraps
- Fruit peelings
- Bread and grains
- Tea bags
- Non-greasy leftovers
- Coffee grounds and filters
- Well-crushed eggshells



Don't Feed

- Meat
- Bones
- Dairy products
- Rubber bands
- Twigs and branches
- Dog and cat feces
- Greasy foods



Begin feeding your worms only small portions at a time. As they multiply, you can add larger quantities of food scraps. Worms prefer smaller-sized scraps and will eat through them more quickly than large or whole pieces of food. Bury the scraps into the bedding regularly, rotating around

the bin as you go. Indicate the last fed spot with a marker. If you return to the first spot and all the food has not been eaten, feed the worms less for a while. Over time, your worm population will increase to accommodate all your scraps. Worms always need a moist environment. Sprinkle water on any dry spots in your bin.