

Worm your way into composting

What is worm composting?

Worm your way into composting by using worms to recycle your food scraps and organic kitchen wastes. Worm composting - or vermicomposting - uses worms to eat your organic waste materials and turn them into high quality compost. It's an easy and efficient method to reduce the volume of your household organic waste that is normally thrown in the garbage for disposal.

You can use worms to eat food scraps generated in the kitchen such as fruit and vegetable peelings. After the worms digest the food scraps, they produce worm castings, which is rich organic compost. Worm compost can be used on houseplants, vegetable and flower gardens, and lawns.

There are many types of worms in our soils, but not all worms can be used for vermicomposting. Redworms are the type of worm most suitable for composting. The species *Eisena foetida* and *Lumbricu rubellus* are most commonly used.

Where can I vermicompost?

You can compost with worms anywhere the temperatures range from 40° to 80° Fahrenheit. A garage, basement or even under the kitchen sink are good locations to place your worm composting bin. You should not keep the worm composting bin in direct sunlight because the heat generated will dry out the bedding.

What do I need to get started?

A worm composting bin is a container with a tight-fitting lid. A plastic storage tub that is at least 12 to 15 inches deep works well. You need to have ventilation holes in either the lid or sides of the bin to allow air circulation for the worms. A four-to-six-inch layer of damp bedding in the bottom of the bin provides the air, moisture and source of carbon worms need. A mixture of shredded materials works best - black and white newspaper, cardboard, leaves, soil and sawdust. The bedding should be as damp as a wrung-out sponge and fluffed to create air pockets.

You will need one pound of redworms - about 1,000 worms - to start. Redworms are available at bait shops and through specialty worm growers, mail order and the Internet.

What do worms eat?

Worms are basically vegetarians. They love fruits and vegetables. Do not feed your worms dairy or meat products; these foods spoil and can create odors in your bin. Chopping the food scraps into small pieces makes it easier for the worms to eat them. Redworms can consume half of their body weight in food scraps each day.

Worms love. . .	Worms hate. . .
Vegetable scraps	Meat & fish
Fruit peelings	Butter
Bread	Cheese
Tea bags	Greasy/oily foods
Coffee grounds & filters	Animal wastes

How do you feed worms?

When feeding the worms, bury the food scraps several inches into the bedding to prevent fruit flies and odors. Rotate the placement of food scraps, burying them in a different place each time you add them. Don't overload the bin. If the worms aren't eating the scraps as fast as you put them in, stop feeding them until they catch up.



How do you harvest compost?

The compost can be harvested every few months, when you can no longer identify pieces of the original bedding and everything looks brown and earthy. Push the compost to one side, then add fresh bedding and food scraps to the other side. The worms will move to the fresh bedding over the next several weeks. Then you can remove the finished compost and add more bedding.

CONDITION	PROBLEM	SOLUTION
WORM BID ODOR	Too much food	Feed less.
TOO WET		Add dry bedding.
TOO DRY	Worms are inactive	Sprinkle surface with water, move bin to cooler place.
FRUIT FLIES	Food is not buried	Make sure all food scraps are buried. Cover surface with plastic or sheet of newspaper.
WORMS ARE NOT EATING	Too much food	Feed less.
TOO ACIDIC	Too much citrus fruits	Eliminate citrus scraps. Sprinkle surface with crushed eggshells.

USING WORM COMPOST

Worm castings make a very rich, natural fertilizer that can be used for:

HOUSEPLANTS

Spread up to 1/4 inch thick on top of potting soil.

FOUNDATION PLANTS

Layer around each plant. Azaleas and rhododendrons love it!

GARDEN PLANTS

Sprinkle in the seed row or transplant hole.

POTTING MIX

Mix together:

- 1 part worm compost for nutrients
- 1 part peat moss for water retention
- 1 part perlite for aeration
- 1 part sand or soil for body

WORM FACTS

 Redworms produce eggs in cocoons that hatch in about three weeks.

 Redworms have five hearts.

 Redworms can live four to five years.

 "Vermes" is Latin for "worm."

 Worms don't have eyes, but are very sensitive to light.



Visit DEP's Web site to see how a worm bin is put together and other composting information.

For more information, visit www.depweb.state.pa.us, keyword: Composting.