

How to Make a Worm Bin

I. Materials needed

- Opaque, flexible plastic bin, approximately 18 x 20 x 15 inches
- Shredded newspaper
- Water
- Compost or soil (a few handfuls)
- Drill with 1/8 in. bit
- Red wiggler worms sold over the internet (do not use earthworms)

II. To make bin

- Drill holes in top of bin and part way down sides.
- Dampen the shredded paper and squeeze out excess moisture (like a sponge with the excess water squeezed out).
- Fill the bin with about 8 inches of moist newspaper bedding.
- Mix in a few handfuls of compost or soil.
- Place worms in bin and replace cover.

Maintaining Your Worm Bin

Worm bins take very little effort to maintain, but it is important to make sure that the bin doesn't become dried out or too wet. They require occasional feeding and temperatures between about 60 and 80 degrees to thrive. The following guidelines can help you maintain ideal conditions for your worms.

- Keep the bin in an area where the temperatures are not extreme. Basements and garages work well, but some people also keep them in their kitchens for convenience. A properly maintained worm bin does not smell. Since vibrations can disturb them, it is better not to keep them near a refrigerator, for example.
- Feed them vegetable and fruit scraps, pasta, or old food from the refrigerator. They are especially fond of pumpkins, melons, and canned baked beans. Do not put meat, fish, bones or oily/greasy foods in the bin. Never put in dog or cat feces because they can carry parasites. Finally, avoid citrus peels, onions and garlic. Feed worms an average of one pound per square foot of bin surface area per week. Don't worry about leaving home for a few weeks; they will be fine.
- It is important to maintain the correct moisture level in the bin. The bedding (shredded newspaper) should be just damp enough so that a drop of two of water will come out when squeezed. Don't let the bedding dry out because worms need 70% moisture to breathe through their skins. On the other hand, don't allow standing water in the bottom of the bin. (See Troubleshooting below.)

Troubleshooting Worm Bins

Problem	Cause	Solution
Bad odors	Bin too wet	Tip bin and remove water with turkey baster Put in dry bedding
	Too much food	Stop feeding for a week or two
	Not enough air	Add more air holes; fluff bedding
Food on top smells	Bacteria	Bury under bedding
Flies	Insect eggs	Keep bin covered and bury food in bin Add food as soon as available or freeze Avoid banana peels (carry fruit fly eggs)
Bedding too dry		Add water or water food (melons are good) Lay sheet of black plastic on top of bedding
Bedding too wet		Add dry bedding Drain off standing water on bottom
Worms crawling up sides		Put bin in light area with top off (worms avoid light) Try not to disturb them Keep them away from strong vibrations

Harvesting Your Vermicompost

There are several methods for harvesting the rich compost (vermicompost) your worms produce. After collecting, particularly if it is very wet, the compost should be allowed to dry out and finish for a month or two in an open bin or container.

Method One

- Dump the contents of the bin onto a large sheet of plastic in a well-lighted area.
- Separate compost into small piles. Worms will crawl to bottom of piles.
- Moving from pile to pile, take off the top later of compost and put in a container.
- Continue removing compost until mass of worms is left at the bottom of the pile.
- Return worms and remaining compost back to bin with fresh, moist newspaper bedding.

Method Two

- Remove two thirds of the contents of the bin and set aside to finish composting.
- Add fresh bedding and food to the bin. There will be enough worms left in the remaining third of the vermicompost to repopulate the bin.

Method Three

- Move the contents of the bin to one side.
- Put in fresh, moist bedding and food in the other half of the bin. Worms will gradually migrate to side of bin with new food and bedding
- Allow several weeks to a month, and then remove old vermicompost from bin. Don't worry if there are a few stray worms left in the old compost.

Uses for Vermicompost

Worms produce a dark compost rich in useful bacteria, fungi, nematodes, enzymes and plant nutrients, which makes a wonderful additive for soil. This vermicompost can be use in numerous ways.

- Use in potting soil (10% to 15%)
- Sprinkle lightly in seed beds
- Place small amount in planting hole with transplants
- Use a top dressing in the garden (1/4 in. layer)
- Make "compost tea" to feed plants. Add 2 tablespoons of vermicompost to 1 quart of water and allow it to steep for a day, mixing it occasionally. Water your plants with this tea.

Noncommercial Web-based Sources:

[Composting Your Organic Kitchen Wastes with Worms - Virginia](#)

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pubs.ext.vt.edu/442/442-005/442-005.html

<http://www.bae.ncsu.edu/people/faculty/sherman>

This site, maintained by Dr. Rhonda Sherman, Specialist, Solid Waste Management, University of N.C., contains extensive information on vermicomposting.

<http://www.cfe.cornell.edu/compost/worms/basics.html>

This site was created by the Cornell University Composting Team.

Books:

Appelhof, Mary. 1997. Worms Eat My Garbage. Flower Press, Kalamazoo, Mich.

Hand, Julia. 1995. Wonderful World of Wigglers. Food Works, Montpelier, VT.

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