

How to Set Up an Indoor Vermicomposting Bin

It is quite easy to compost indoors with worms, converting materials such as food scraps, old cereal boxes, shredded paper, and coffee grounds into a high-quality plant food and soil conditioner. However, there are some basic requirements that must be met if your vermicomposting is to be successful and sustainable.

Containers

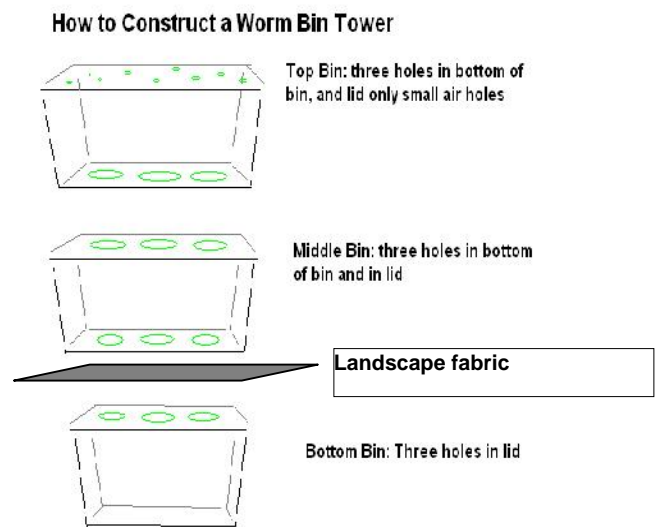
You can keep worms in almost any type of container, but most people choose a plastic tote, similar to a recycling bin. You can also use pails, buckets, wooden boxes, and any other recycled container you might have think of. To set up the bin, just drill the holes in the raised areas on the bottom (most bins have ridged bottoms), and put the bin on top of the leachate collection tray (the liquid that drains from the bin). Drill a few holes in the lid for air.

The worm bin tower design is great for small spaces, offices and under kitchen sinks. Using clear totes with lids, the bottom container holds the leachate, while the top two containers hold the bedding and worms, who will travel between the two via the holes in the lids and bottoms.

Bedding

Bedding is simply high-carbon material (known as “browns” in composting circles), such as shredded paper, cardboard, peat moss, dried leaves, wood shavings, etc. Worms need bedding to live in – if there is nothing but “greens” (e.g., food scraps, brass clippings) in the bin, the worms will not be healthy. Fill the bin to about 1/3 of its depth with moist bedding (moist means that if you pick up a handful and squeeze it, a few drops will come out). Bedding should be shredded into small pieces added regularly; some people add bedding (usually shredded newspaper) every time they add food wastes.

Good beddings include ripped newspaper, shredded office paper, ripped cardboard, ripped paper egg cartons, coffee filters, peat moss, and coir (coconut shell husks). A mixture of two or more of these works very well.



*note: the landscape fabric ensures that worms do not fall into the bottom leachate container



Feeding

You can feed your worms anything that was once alive (i.e., organic), but there are some basic rules.

What to feed the worms:

Crushed Eggshells
Coffee Grounds
Tea Bags (remove staples first)
Vegetable scraps, stems, peels
Beans, Rice, Pasta
Grains, cereals, breads

DO NOT FEED THE WORMS:

Citrus (peels or segments)
Meat Products
Dairy Products
Excessively Oily Items (e.g. fried foods)
Onions/Garlic or any food heavily flavoured by onion or garlic

Although worms can process meat and dairy products, these should be kept to a minimum. For example, chicken bones off peoples' plates are OK, but the grease from the roasting pan is not. The key is NOTHING GREASY, as that can suffocate your worms (remember, they breathe through their skins!)

How much can you feed them?

A tote with about two square feet of surface area can handle about 4 or 5 lbs of odd waste per week. The best way to determine whether you are over-feeding is with your nose: if it stinks when you open the bin to put in the day's scraps, you are feeding too much. To feed, just take off the lid, dump the food in, spread it out a bit (a small fork works well for this), add some bedding (a few sheets of newspaper, for instance), put the cover back, put the lid back on.

Moisture

If you have drainage holes, and you add bedding from time to time, you shouldn't have a problem with too much moisture. Alternatively, letting a worm bin get too dry will kill your worms even more quickly than excess moisture. However, if you are adding food wastes regularly, this should not be an issue.

Common Problems: Mites and Fruit Flies

If you find your bin infested with tiny white or red mites, so that the sides and top of the material looks like white or red moving velvet, you have a pH problem – your bin is too acidic. The red mites, in particular, are bad news, as they are parasitic on the worms. Add eggshells will help to raise the pH, and you can scoop out the mites with a spoon or tissue.

Fruit flies can be avoided by keeping your bin outdoors, in a garage or shed or on a verandah or balcony, for $\frac{3}{4}$ of the year, bringing it in from December through March

You can also avoid fruit fly problems by washing all of your fruit with one of those vegetable soaps as soon as you bring it home from the store or market. The fruit fly eggs are on the fruit skins and if you wash them off before the skins go into the worm bin, you won't get fruit flies.

Harvesting from your Indoor VermiComposter

There are a number of different methods for separating the vermicompost from the worms, depending on your bin size and type. For this system, you either need to be operating with two or more bins or to have someplace else to put the organics (e.g., the municipal collection program, a backyard composter, etc.) for a couple of months while you prepare your bin for harvest.

Method for Single Large Bin

First step: When the bin is getting close to full, stop feeding. Let it sit for at least 5 or 6 weeks, checking once in a while to make sure that it does not dry out. When you no longer see any unfinished materials in the bin, you can start the harvesting process.

Second step: Place the bin on a table or some other convenient place where you can shine a light directly on the surface of the bin. Remove the lid and cover and let the light shine directly on the vermicompost surface. Let it sit for about 15 minutes or so. The worms don't like the light, so they will dive deeper into the material.

Third step: Using a garden trowel (or a large kitchen spoon), gently scrape off the top half-inch or so of the vermicompost, placing it in whatever container you can find for storage. You may be able to scrape a bit deeper, but once you start seeing worm tails, you need to stop. Give them another 15 minutes. Repeat several times until you get to the last step.

Fourth step: You will eventually get to the point where the worms can't dive any deeper. Add some new bedding on top of them and start feeding again.

Method for Worm Bin Tower

First step: Set the tower on a large plastic sheet. The middle container will usually be ready to harvest before the top one. Separate the two sections onto the sheet.

Second Step: Dump the contents of this bin onto the sheet and shine the light on the pileas in the single bin method. Harvest gradually from the top, giving the worms time to crawl to the bottom.

Third Step: Screen the contents through a sieve or other mesh material, gently sifting using your hands to make sure there are not worms left in the material.

Fourth Step: Put the worms back into the bin (the one that was on top) and make this the middle bin. Switch the middle bin to the top and fill it with fresh bedding and food. The worms will continue working on the centre bin and you can repeat the process in a few weeks or months.



Other Sources of Information on Vermicomposting

Contact Colette at Toronto Green Community for more information on Community Composting initiatives and workshops on vermicomposting:

garden@torontogreen.ca

Books

Mary Applehof "Worms Eat My Garbage"

Websites

Compost Junkie – it includes lots of info on Vermicomposting: <http://www.compostjunkie.com/>

Vermicomposters.com - a social networking community for people who have a worm bin/compost with worms or for people who are thinking about getting started:

<http://vermicomposters.ning.com/>

Worm Suppliers

Cathy's Crawly Composters- Red Wigglers, vermicomposters, books, videos and bedding. All you need to get you started! <http://www.cathyscomposters.com/squirm/>

City Farmer. Org- A List of Worm Suppliers in Ontario and other provinces:

<http://www.cityfarmer.org/wormsupl79.html>

Worm Composting Canada – Elmira, ON. Red Wiggler Worms, European Nightcrawlers and composting supplies. www.wormcomposting.ca

Compost Worm.ca- Holland, ON. A supplier of red composting worms and composting supplies.

compostworm.ca E-mail: clunman1@gmail.com

City of Toronto Guides

City of Toronto's Worm Your Way into Composting Mini Guide:

<http://www.toronto.ca/compost/wormyour.htm>

Composting With Worms

<http://www.toronto.ca/compost/withworm.htm>