

How to Vermicompost: The Art of Feeding Worms

Vermicomposting is a great way to turn food scraps into rich fertilizer for your plants, even in apartments and other small spaces. It's fun and educational for kids, and worms make very low-maintenance companions!

The Basics:

You'll need:

- 2 sturdy plastic containers that can nest, with one well-fitting lid (5-gallon buckets work well)
 - A drill with 3/16" or 1/8" bit
 - Shredded cardboard, newspaper, or printer paper for bedding
 - Handful of garden soil
 - Red wiggler worms (find online or at a bait shop)
 - Food scraps (see list below)
1. Take one of the two containers. This will be your inner bin. Drill holes every inch or two in the bottom and top lip of the inner bin. This will provide drainage and air flow for the worms.
 2. Stack the inner bin inside the other container (outer bin). The outer bin will collect "worm tea" and keep any odors contained.
 3. Wet the bedding material and squeeze out excess moisture so it is just damp. Add a few inches of this moist bedding to your worm bin. Add a handful of garden soil, which can provide beneficial microbes and grit to help the worms digest.
 4. Add your worms, along with some of the compost they came with, if possible. Depending on the size of your bin, a few handfuls of worms should be sufficient, as they will reproduce prolifically under the right conditions.
 5. Feed your worms a light meal as they adjust to their new home. Don't overfeed them, as excess rotting food can create an inhospitable environment.
 6. Tuck your worms in by closing the lid securely. Worms like their privacy, so resist the temptation to open the bin frequently! Keep the bin in a safe place like a basement where it won't experience extreme temperatures.
 7. Feed the worms once a week or so, burying the new food in the existing bedding. Depending on your worm population, they should be able to handle a pint or so of scraps a week. This is a good time to check on your worms and make sure you have a good population. If you find food that has been left uneaten for a long time, you may want to break it into smaller pieces or remove it.
 8. Once a month or so, add more damp shredded paper or other bedding (ripped up egg cartons, wood shavings, and peat moss also work). The contents of your worm bin should be moist but not wet.

What to Feed:

- Raw or cooked fruit and vegetable scraps
- Coffee grounds and filters
- Tea and tea bags
- Cooked grains and beans
- Bread and pasta
- Paper napkins and paper towels
- Eggshells

What to Avoid:

- Meat, dairy, and eggs (egg shells are ok)
- Oily or greasy foods
- Pet waste
- Citrus, which can be irritating to worms
- Onions, garlic, hot peppers, and spicy foods

Worms especially like soft, easy to digest foods and foods broken into small pieces. They won't eat seeds, so if you add tomato, squash, or other seeds, you will likely end up with sprouts!



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Harvesting Your Vermicompost

After a few months, you will have smooth, dark, soft, earthy-smelling finished compost in your worm bin. There are several ways to go about harvesting this finished compost when your bin gets full or you are ready to use it:

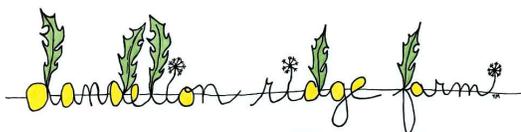
- You can spread a tarp and simply dump your worm bin onto it, then sort out any remaining food scraps and most of your worms to put back in your bin and start fresh. This is a great (messy!) activity for kids to help with!
- If you are using 5-gallon buckets, drill 1/8" holes in the bottom and top lip of a third bucket to make a second inner bin. Add bedding and food scraps to this bucket as you did when you first set up your bin, then nest it on top of your first inner bin. The worms should eventually get hungry and migrate through the holes in the bottom of the second inner bin in search of food. When most have moved to the new bucket, remove the first inner bin of finished compost.
- If your bin has a wide bottom, shift the finished compost to one side of the bin. Add bedding and start feeding in the empty side of the bin. Feed some extra soft fruit, mushrooms, or other worm delicacies to encourage them to move from the finished compost to the new materials. Check your bin for worms over the next few weeks, and when most have moved from the finished side to the active side, remove the finished compost.
- Over time, your bottom bin will collect liquid that drains through the holes in your active compost bin. You can collect this nutrient-dense "worm tea" to feed your plants.

Handling Issues in the Worm Bin

- You may find creatures other than worms in your bin. Most, like pill bugs, soldier fly larvae, and little white springtails, won't cause a problem, and can even help with the decomposition process. Infestations of other species can be indicators of an unhealthy environment for the worms—such as too much food—and can resolve if the environment is improved.
- Worms trying to run away from home are also an indicator of environmental imbalance, often too much moisture. Adding dry bedding or opening the bin to let it air out can help.
- If your bin starts to smell or attract fruit flies, make sure you are burying your food scraps and not overfeeding or feeding strong-smelling scraps that the worms don't like.
- Most issues are caused by the worm bin being too wet or too dry (usually too wet), too little airflow, or overfeeding or underfeeding (almost always overfeeding). Don't be surprised if it takes a little time for your bin to thrive after you've corrected these situations.

Resources

- "How Vermicomposting Works" by Jennifer Pocock, How Stuff Works, <https://home.howstuffworks.com/vermicomposting.htm>
- "Vermicomposting for Beginners" by Rick Carr, Rodale Institute, <https://rodaleinstitute.org/science/articles/vermicomposting-for-beginners/>
- "Working Worms" website, working-worms.com
- "Worm Composting Basics" by Jen Fong and Paula Hewitt, Cornell University, <http://compost.css.cornell.edu/worms/basics.html>
- *Worms Eat my Garbage* by Mary Appelhof and Joanne Olszewski, Storey Publishing 2017



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