

Bin has unpleasant odor –

Bin has become too wet. Try adding only foods with low water content for awhile and adding more bedding. Bin may not be getting enough air. Make sure you have enough air circulation all around the bin. Anaerobic bacteria (bacteria that thrives without air) is smelly. Air out the box. Make sure you have not added any foods that are not recommended, i.e., meats, bones, dairy, oily products. They will become rancid.

Worms dying –

Bin too wet, worms drowning. Bin too dry, worms dry out. Not enough air circulation, worms suffocate. Make sure worms get enough food. Once they devour all of their food and bedding, they will begin to eat their own castings. These are poisonous to them.

For more information or questions about vermiculture, contact your local CSU extension office.

Success Tips for Vermicomposting

(Composting with Worms)

The Worms

- Must use Red Wigglers – *Eisenia foetida* - They adapt to new locations, new feed, new schedules faster and they reproduce faster than other worms, i.e., the earthworms in your garden.
- Need about 1 pound of worms to start (approx. 1,000 worms per pound)
- That many worms can process up to 3-5# of food per week – slightly less at first and more as they reproduce
- The worms will reproduce in numbers 5-6 times in 3 months – about the time the first batch of compost is ready to harvest. You should give worms away to a friend to start their box then and get back down to the one pound of worms. Red wigglers do not live through the winters here in our climate, so turning them into your garden is only a short lived solution. They will become frozen compost themselves if left to over winter outside.



The Box

- The material of the box is less important than the ability to have it dark and to be able to make drainage and air holes.
- For a two person family, a box 2' x 2' x 8" is adequate. This size will only require about a half pound of worms to begin with instead of a full pound.
- Plastic file or storage boxes work great as long as they are not clear, or wood boxes are very nice and give additional insulation.



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- Drill 20 or so holes with a ¼” drill bit in the bottom. Screw on two 1 x 2’s or 2 x 4’s for feet and to raise the box off the ground for good air circulation. The worms do not crawl out of the holes.
- Drill ½”-1” holes along the top sides of the box all the way around; again for good air circulation.
- Box should have a lid – preferably not see through.



The Bedding

- Standard rules for composting are applicable – equal carbon (brown material) to nitrogen (green material).
- Worms will consume the bedding as well as the food.
- Carbon material can be cardboard rolls from paper towels, bath tissue, wrapping paper (the glue used in corrugated cardboard is not desirable for the worms and should be used sparingly if at all), paper egg cartons, black and white newspaper or funny papers, but not the highly colored inserts or magazines, or paper shredder paper if not much highly colored inks are used.
- Dampen, but not soak, paper before adding worms. It is best to do this in layers and with a spray bottle, as opposed to dumping water which will cause the paper to clump.
- The worms need to be able to crawl freely through the bedding.



The Food

- Nitrogen material is the food scraps you will feed your worms. It can consist of fruit and vegetable scraps and peelings, raw, not cooked.
- Exception: Use onion and citrus very sparingly
- Coffee grounds, used filters, tea leaves, tea bags (pull them open). All these may be used, but not every day as it will make the box too wet and cause anaerobic conditions.
- Houseplant trimmings as long as not diseased or buggy.
- Crushed eggshells
- Avoid any meat or dairy products, no manure of any kind
- Never scrape leftovers off plates into the boxes. Salts will dehydrate them and oils from sauces and dressings will clog their ability to breath. Food scraps should be raw only.
- Feed about 2-3 Cups per week at first if you started with a pound of worms. If less, estimate by volume the worms and match that with food. As



the worms multiply, you can increase the volume of food per week, up to 5 pounds near the end of the 3 months it takes to turn everything in the box to compost.

- Feed in a different spot each time to move the herd. Do not stir the bedding and the food as you will create a “compost pile” effect. This will heat up and kill the worms.

Harvesting the Box

- When box is nearly ready by about 3 weeks, feed to one side only so your herd will migrate to that side of the box and you can remove completed compost on the other side, and only have to “sift out” a few worms as opposed to hundreds.
- Once new vermicompost is removed, replace the bare side with new bedding and dampen it well and then feed in it. In a couple of weeks the worms will migrate to that side and you can repeat the removal process. This is the time to remove a good ½ to 2/3 of your worms and give them away to a friend, so you can start fresh. You likely have 3-4 thousand worms now. Or you can start another box of your own, but crowding will only serve to crush the worms or suffocate them and you will loose them anyway.



Using the Product

- The compost can be used as you would any other compost, although the volume will not be huge. Houseplants benefit greatly from this nutrient packed material as well as garden plants. Research has recently shown that a sprinkling of vermicompost in seed starting mix helps to inoculate seedlings from disease and makes them slightly stronger.

Troubleshooting

Fruit Flies –

Usually a result of using too much food. Worms cannot eat fast enough and it begins to rot attracting the flies. Cut food in small pieces which they can eat more quickly. Do not puree food. The bin can get too wet and they actually like to chew. Failure to bury the food can also attract fruit flies. Make sure it is covered after each addition. For temporary relief of flies, take bin outside in shade and open to air if it is warm enough to release flies outside. Fruit flies are also called vinegar flies as they are attracted to vinegar. Fill a bottle partially full and flies will go in and drown.

Feed a varied diet –

Worms like as much variety as you do. Initial excitement over your new means of composting may cause you to do things like dump the daily coffee filter and wet grounds in everyday, but this is not a good idea. Bin will become too wet and soon too anaerobic.