

Vermicomposting – Cheap and Easy Worm Bin ¹

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Materials:

1. Two 8-10 gallon dark colored plastic storage containers as shown in pictures.
2. Drill, electric or cordless
3. 1/4" Drill bit for making drainage holes.
4. 1/16" Drill bit for making ventilation holes.
5. Newspaper (black and white print, no color pages).
6. One pound of red wigglers.
7. Two clay bricks.

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Directions:

1. Drill about twenty evenly spaced 1/4 inch holes in the bottom of one container. These holes will provide drainage.



2. Drill ventilation holes about 1 – 1 ½ inches apart on each side of all the containers near the top edge using the 1/16 inch bit. Also drill about 30 small holes in the top of **one** of the lids.



3. Prepare bedding for the worms by shredding Newspaper into 1 inch strips. Worms need bedding that is moist but not soggy. Moisten the newspaper by soaking it in water and then squeezing out the excess water. Cover the bottom of a container that has ¼" holes in the bottom with 3-4 inches of moist newspaper, fluffed up. Add an half cup of soil for "grit" to help the worms digest their food. Place two clay bricks in the bottom of the container that has no holes in the bottom and place this container with bedding on top of the two bricks.



4. Add worms (red wigglers) to the bedding. Purchase worms in bulk, the Cooperative Extension office can give you names of suppliers.



5. Cut a piece of cardboard to fit over the bedding, and get it wet. Then cover the bedding with the cardboard. This will keep down the fruit fly population. Then place the lid with the holes on top of the container with the worms and bedding in it.

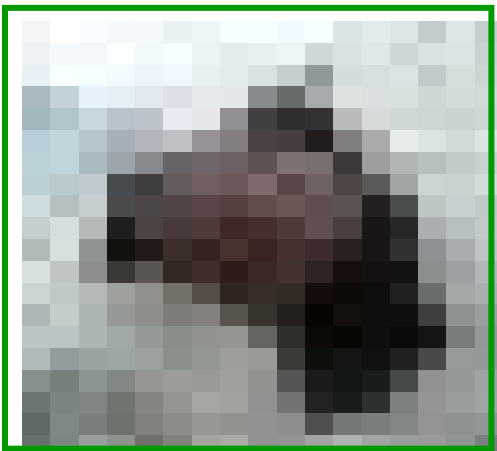


6. Place your bin in a well-ventilated area such as a laundry room, garage, balcony, under the kitchen sink, or outside in the shade. Worm liquids will accumulate in the bottom container and may be used as a low analysis liquid fertilizer. ²



7. Feed the worms slowly at first. As the worms multiply, begin to add more food. Gently bury the food in a different section of the container each week, under the cardboard. The worms will follow the food scraps around the container.

8. When the first container is full and there are no recognizable food scraps, place the castings and worms on a white plastic trash bag or several layers of newspaper (these can be used in the worm bin later) under full light. After 15-20 minutes the worms will crawl into the casting to get away from the light. Use a large spoon and collect the castings in another container (wear plastic/latex gloves). Repeat this several times to collect all the casting you can. Place new bedding material in the cleaned out container with holes in the bottom and follow the procedure in direction #3 above and return the worms to the container.³



Troubleshooting

Problem	Probable Cause	Solution
Worms are dying or trying to escape	Too wet Too dry Bedding is used up	Add more bedding Moisten bedding Harvest your bin
Bin stinks!	Not enough air Too much food Too wet	Drill more ventilation holes Do not feed for 1-2 weeks Add more bedding
Fruit Flies	Exposed food	Bury food in bedding

Footnotes:

1. Material for this handout was obtained from Washington State University Extension (<http://whatcom.wsu.edu/ag/compost/Easywormbin.htm>) for educational purposes only. Additional pictures from University of Arkansas and Iowa State University.

2. To find out what is in the "worm liquids", see an interesting article provided by the Garden Professors: <http://blogs.extension.org/gardenprofessors/2013/05/01/whats-in-the-worm-juice/> And the conclusion: based on the nutrients and nothing else, this could be a great liquid fertilizer if it were used properly. Dilute it somewhere between 1:1 and 1:5 worm juice : water before applying it. Apply it once every week or two. Try it on something that is not a favorite plant, just to make sure that it doesn't do anything too terrible (exercise caution).

3. Castings are a natural by-product of earthworms and are rich in organic matter, and nutrients for plants. When added to normal soils in gardens or lawns, they will provide the same kinds of benefits as other bulky organic fertilizers. The nutrient value of the casts will be dependent upon what organic materials are being fed to the worms. Generally the casts should be roughly equivalent to compost prepared from the same organic materials less what was removed within the worms harvested. Castings today are not commonly used as fertilizer by large commercial plant growers, because their cost is relatively high compared to other fertilizers containing the same or greater amounts of nutrients. However, castings are used by some organic gardeners, and are sold commercially in a few nurseries as a soil amendment or planting medium for ornamental plants grown in baskets or flowerpots.
<http://aggie-horticulture.tamu.edu/archives/parsons/publications/worm/worm.html>