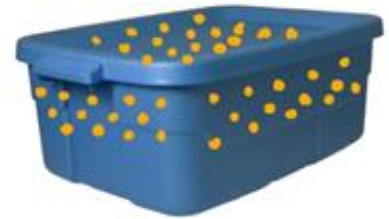




## HOW TO MAKE YOUR OWN PERSONAL WORM BIN

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1. Purchase a 10 Gallon plastic container. These can be found at Home Depot, Lowes and sometimes the Dollar Stores. Make sure that you can't see through the container. You want the container to be longer and wider than it is tall. Compost worms, Red Wigglers-*Esenia foetida* are surface feeders and do not do well in taller containers.
2. Drill  $\frac{1}{4}$ " holes around the upper half of the sides of the container (see picture). I usually drill three rows of alternating holes. Do NOT drill holes in the bottom of the bin. You can also drill holes in the lid.
3. Order Red Wigglers from a reputable worm farm. You will need at least one pound of worms to start your bin.
4. Obtain a lot of old newspapers. Worm bins are a great way to recycle old newspapers.
5. You will want to shred your newspapers. The easiest way to do this is to pick up one whole section of the newspaper and hold it the top left hand corner (if you are left-handed, hold in the opposite corner). Using your free hand, start at the top of the newspaper and gently tear down making about 1" strips of newspaper. When you have finished shredding the whole section of newspaper, grasp all of the sections in one hand and shake it like a pom-pom to fluff the newspapers. Then gently put them into the worm bin. Continue shredding until your bin is completely full of shredded newspaper.
6. Get a pitcher or container of water. Gently pour over the shredded newspaper a cup or two at a time. After pouring in the water, gently stir the newspapers around until every piece of newspaper is dampened. Make sure there isn't standing water in the bottom of the bin. If there is, you can just gently tip the bin and pour it out. Worms exchange oxygen through their skins so they need a damp environment.
7. The bin is now ready to add your worms. Gently tip the worms into the bin, and then cover them with the wet newspapers.
8. When worms are freshly added to a new environment, they will sometimes attempt to flee to escape their close quarters in shipping. I like to leave my new worm bins in an enclosed room (like a bathroom), with the lights on for two days. This gives everyone a chance to settle comfortably into their new quarters.
9. About three to five days after adding worms to your bin, you can begin adding food scraps. Red wigglers have a huge appetite and can eat up to one-half of their body weight in a day. New colonies take a while to get to this amount, so start off slowly adding food. This is why it's a good idea to know how many worms you started your bin off with.



10. I like to feed my worms once a week. When adding the food, picture the lid with numbers across it. Sometimes I like to write the numbers on the lid with a Sharpie. It should look something like this.

1	2	3
4	5	6

11. When it is time to feed your worms, tuck the food scraps under the newspaper (towards the top) below the number 1. Next week when you feed the worms you would place the food scraps under the number 2, and so on and so forth.

12. Remember to check your newspaper occasionally to make sure it stays damp.

13. Most people have more problems with their bins being too damp, not too dry. Food scraps contain a lot of water. If you see your bin becoming too wet, just add more fresh dry newspaper and gently stir it in.

14. Your Red Wigglers can eat anything that used to be a plant. That's why they are such a great resource for recycling food waste that takes up 21.9% of our landfills. In 2017 the USA generated over 56 million tons of food waste that was sent to the landfill as a wasted resource. This means you can put in carrot scrapings, onion skins, apple cores, banana peels, the list is endless.

15. The only rules about what NOT to put in your worm bin as a food source is anything citrus. So, no lemon, lime or orange peels.

16. Red wigglers also need calcium to reproduce. Therefore, you should add crushed eggshells to your worm bin every so often.

17. One day you will open your worm bin and notice that the newspaper is almost all gone, and the worms have produced a black product. These are called worm castings, otherwise known as "Black Gold" because they are the best fertilizer for your plants. It is expensive to buy worm castings from the store, so why not just make them yourself for free from things you were just going to throw away?

18. Once your bin is full of castings you will need to remove the castings for future use, but retain the worms in your bin. There are two ways to do this:

A) **The Shove Method.** Using your hands or a tool, scoop all of the worm castings over to one-half of the worm bin. Then shred newspaper, dampen it, and add it to the empty side. It will require anywhere from two-four weeks for the worms to migrate over to where the fresh food is and leave the castings for you to scoop out.



**B) The Dump Method:** This is a much faster way to get your castings. I like to dump the whole bin out onto a table that has been lined with newspapers. Once it is all dumped out, separate the castings into small mountains, four to six inches diameter each. This needs to be done either in a brightly lit room, or outside on a sunny day. Worms don't like the light (it dries out their skin) so they will burrow to the bottom of the mountain. You will see that the castings at the top of each mound will begin to dry out a little and look crumbly. Using your hands, scoop off the top of each mound to the side and wait a little longer for the worms to move further down into the pile. Keep scooping and waiting, and eventually you will end up with nothing but a small mass of worms, and lots of nice fresh castings. Return your worms to a new fresh bin, and begin feeding your worms again.



Step 1 – laying out your casting mountains

Step 2: Removing castings from the top of the mountains.

Step 3: Final results



If you are working outside, here is a good way to set up this process:

<https://rimstar.org/vermicom/harvesting.htm>



19. Once you have separated all of your worms and egg casings (these are very small and lemon shaped and will be an orangish color), you can put a final touch on your worm castings if you desire. You can make a compost/casting screen out of  $\frac{1}{4}$ ' hardware cloth and pieces of wood. Gently place a large scoop of castings on top of the screen (make sure you have a container underneath to catch the castings), and gently move the castings back and forth across the screen with your hands. Screening helps to break up any big clods of castings and makes it a uniform size.



20. Now it's time to use your worm castings! Castings are an amazing soil amendment and provide long term nutrition to the living organisms in your soil, both plants and animals. Castings have higher levels of nitrogen, phosphorus, potassium, calcium and magnesium than soil and compost. They also help prevent damping off of seedlings.

In a 30 day study done by UGA on tomato seedlings, they used three replications, 100% red clay, 100% potting soil, and 100% castings. All other conditions were kept the same. At the end of the thirty days, the group of tomatoes with 100% castings had out grown the other conditions by an average of 126%. The study went on to conclude that it is not necessary to use 100% worm castings, but 20% castings will provide maximum benefits.

21. Castings can be used as a top dressing for any plants, or used to help germinate seeds. You can also make a worm casting tea to use in the place of a liquid fertilizer like Miracle Grow.

22. Congratulations on making an amazing resource and helping to recycle food waste!