



How to Make an Earthworm Box

Things you'll need: Drill, Drill bits size 60 to 80, Dark plastic bin.

Instructions

Choose a dark bin. The vermiculture process can take place in a variety of containers, typically called worm bins. A wooden box, an old tub or a plastic drum can serve the basic functions of a bin. Any container will work if it's 2 cubic feet or larger, and has a cover for keeping the contents moist and some type of ventilation. You can keep bins outdoors or indoors. Vermi-composting is odorless. For optimum production, however, keep the temperature between 59 and 77 degrees Fahrenheit.

Drill holes for ventilation and drainage into the bottom and sides of bin. Drill bits ranging from size 60 to 80 will produce appropriately sized holes. The holes should be evenly spaced and approximately one inch apart. The number of holes you drill will depend on the size of the bin. The bottom holes should cover the entire bottom of the bin, while the side holes should be near the top of the bin and should form a line of holes wrapping completely around the bin. Worms need an air supply.

Shred newspaper into strips that are 1/2-inch to 1-inch wide. This will be the bedding in the bin. Worms like a moist, humid environment, so soak the newspaper in water. Wring out the newspaper to drain excess water. Cover the bottom of the bin with the newspaper. The newspaper bedding should be five to six inches thick, regardless of the size of your bin. Larger bins will simply allow more space for composting kitchen scraps. Add a few scoops of dirt. Dirt helps worms digest their food and will also aid in the process of decomposition for the food. The goal is to have a small amount of dirt on top of the newspaper.

You can bury food waste in the bedding, including coffee grounds, table scraps, crushed egg shells and vegetable cuttings. Keep the bedding moist, but not soggy, at all times.

Place the worms in the bin. Use a quarter pound of worms for every two square feet of space in the bin. Redworms are readily available at many pet stores and places that sell bait. Garden supply shops also frequently sell worms. Though it's possible to catch worms outside, these worms may be less likely to survive in captivity.

Place a piece of cardboard or a layer of shredded newspaper as a top layer over the food. It will quickly decompose, creating an ideal environment for the worms by absorbing excess moisture.

Keep covered with a lid. Place the bin in a well-ventilated area that is unlikely to overheat. Worms can live in our valley temperatures if kept in the shade in the summer and in a sheltered area in the winter.

As soon as you introduce worms to the bin, they will burrow into the moist bedding. As they burrow, they will swallow organic matter, digest it and excrete or cast out the remains behind them, known as **worm castings** or vermin-compost. The worms also produce egg capsules, or cocoons, from which baby worms will emerge within a few months. The worm population can increase or decrease rapidly depending on the supply of food.

Harvesting the worm castings

Approach harvesting differently depending on whether the primary desired product of your vermiculture is fishing bait or garden fertilizer. Earthworms will take 2 to 3 months to completely consume most food. They leave behind the worm castings so prized as a rich, organic compost for garden fertilizer, as well as an abundance of worm eggs. If you remove all the worms for bait, the population will rebound within a couple of months if you add more food and bedding on top of the egg-laden castings. If you harvest the vermi-compost, give the worms fresh bedding and food scraps to begin the process again.

To harvest the worm castings, place a pile of bin contents onto a black plastic bag in the sun. The worms will crawl to the bottom very quickly to avoid the sunlight. You can scrape the top away, layer by layer, as the worms crawl to the bottom. You are scraping away castings that can be used directly in the garden soil. They will not burn plant roots.

Inquiries regarding ANR's nondiscrimination policies may be directed to Linda Marie Manton, Affirmative Action Contact, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1318. For local inquiries may be directed to UCCE Fresno, (559) 241-7515 or UCCE Madera, (559) 675-7879, ext. 7212.