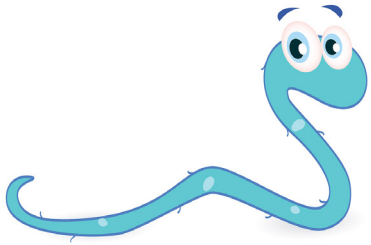


Home Composting with Earthworms

worms.ncsu.edu



Worms can turn food scraps into a soil amendment called vermicompost — worm castings — which increases plant growth and reduces attacks by plant diseases and pests. Vermicomposting is easy, involves little work and can be done indoors or outdoors. All you need is a container, bedding, worms and worm food.



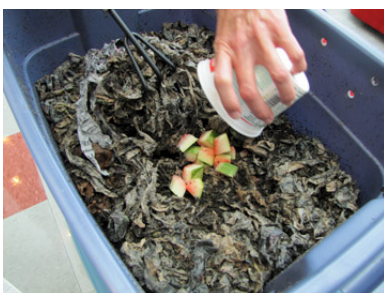
Worm Bin: Buy a manufactured worm bin or make your own from wood or a plastic storage container. The bin should be a dark color to keep out light, have a tight fitting lid, and be 8-14 inches deep. Drill air holes around the upper sides of the bin: either one 3-inch hole on each end (using a hole-saw) plugged with soffit vents or three ½-inch holes on each wide side spaced 5 inches apart (leave open or glue hardware cloth over holes). Drill six ¼-inch holes in the bottom of the bin for drainage.



Placing the Bin: The ideal temperature for composting worms is between 59 and 77 degrees F. Keep your worm bin indoors or outdoors in the shade. During colder months, the worm bin can be insulated with blankets, straw, blue board or other material to keep it warm. Your worms will survive at temperatures between 32 and 95 degrees if they have at least 4 inches of bedding.



Bedding: This can be a mixture of shredded non-glossy newspaper, office paper or cardboard, brown leaves, finished compost, sawdust, straw, coconut pith fiber or rotted and rinsed horse manure. Put bedding materials in a bucket of water and let it soak for 10 minutes. Wring it out so it is a little wetter than a moist sponge. Fluff it up as you place it into the bin. Fill bin about half full of moist bedding and mix in a **handful** of soil.



Worms: Not just any type of worm will work for vermicomposting, so **do not** put worms you find outdoors into your worm bin. Worms most suitable for vermicomposting are called “red wigglers” (scientific name: *Eisenia fetida*). Start with one pound (about 1,000) of red wigglers that you buy from a worm grower. For a list of worm vendors, see: www.bae.ncsu.edu/topic/vermicomposting/vermiculture/nc.html.

Worm food: Feed the worms vegetables scraps, coffee grounds and filters, tea bags, non-citrus fruit scraps and peels, moistened bread and shredded napkins. **Do not feed** the worms meat, fish, dairy products, citrus fruits, greasy foods, bones, twigs and branches or pet feces. Odorous food like onions should be avoided because it can make the worm bin smell bad. **Always cover food with 2 inches of bedding!** Wait until food scraps are eaten before adding more.



Harvesting vermicompost: After three to six months, enough vermicompost to harvest will be in the bottom of your worm bin. Choose one of these methods for harvesting:

- 1) Feed worms on one side of the bin for a few weeks. After most worms migrate to that side of the bin, remove vermicompost from the other half of the bin. Add fresh bedding and start feeding only on that side of the bin (repeat process).
- 2) Empty worm bin onto a plastic sheet under strong light. After a few minutes, collect worm-free vermicompost and place in a container or plastic bag pricked with a few tiny holes. Put in worm bin: fresh bedding, old bedding, worms removed from pile. Worms move away from light, so continue to remove vermicompost from the top of the pile and put worms back in the bin.

Using vermicompost: Vermicompost can be used immediately or stored for later use. It can be added to indoor or outdoor plants by placing 2 tablespoons of vermicompost per quart of potting mix around the base of a plant every two to four weeks. When starting seedlings, add one part vermicompost to four parts potting media. Before transplanting plants from small containers or flats to garden beds or larger pots, add ½ cup vermicompost to the hole for planting. For transplanting larger plants, shrubs and trees, add 1 to 2 cups of vermicompost to the hole. Vermicompost can be applied to new lawns and turf at a rate of 8 quarts (10 pounds) per 100 square feet and worked into 1 to 2 inches of topsoil. Top dress 6 quarts (7 pounds) of vermicompost per 100 square feet of established lawns.

For more information visit

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