

### Why Vermicompost?

- As worms digest the composting materials, they produce an “end product” called castings, which are the richest natural fertilizers known to humankind. A mere tablespoon provides enough organic plant nutrients to feed an 8-inch potted plant for over two months.
- Castings are absorbed easily and immediately by plants; Castings never burn plants.
- Vermicompost is rich in water-soluble plant nutrients including highly concentrated nitrates, phosphorus, magnesium, potassium, and minerals such as manganese, copper, zinc, cobalt, borax, iron, carbon, and nitrogen.
- It allows households that don’t have a yard, such as apartments, condominiums, and houses on small lots to reap the benefits of composting.
- It reduces the food waste going to landfills. In Wisconsin, about 17 percent of the trash that goes to landfills is food waste (Wisconsin Department of Natural Resources).

### Getting started:

The first step in vermicomposting is to set up a place for the worms to live -- a worm bin. Worm bins can be made out of plastic or wood. Be sure that the container you pick has never been used to hold chemicals (the residue could kill your worms). The bins should be about 12-16 inches deep, because worms are surface feeders and won’t go much deeper than that.

To figure out what size your bin should be, use this rule of thumb: you need one square foot of surface area for every pound of food scraps you generate each week. Collect your food scraps for a week, weigh them using a kitchen scale, then size your bin accordingly. For most households, a 2' x 2' bin serves 1-2 people and a 2' x 3' bin serves 3-6 people.

If you’re making a bin out of wood, be sure to use untreated lumber (the preservatives in treated lumber will kill your worms). If you use a plastic bin, be sure to drill holes through the bottom, sides and lid to ensure good circulation. Raise the bin up on bricks or wooden blocks, and place a tray or a sheet of plastic underneath the bin to catch any liquid or castings. Finally, there are many commercial bins for sale if you don’t want to make your own.

### What do I feed the worms?

Worms will eat: shredded newspaper or office paper, shredded cardboard, leaves, peat moss, soil and sand, pulverized egg shells, vegetable scraps, fruit scraps, bread, plant trimmings, flowers, and other organic scraps. The bin should be mostly filled with dry, bulky materials such as paper. The whole mixture should be kept slightly moist -- about as damp as a wrung-out sponge.

### **What Should I Not Feed the Worms?**

Do not put these items in the bin: meat or fish scraps, dairy products such as milk or cheese, leaves off of plants treated with pesticides, cat litter and oily foods like peanut butter or mayonnaise. These items will cause your worm bin to smell, attract pests such as flies, or kill your worms.

### **What Conditions Do Worms Like Best?**

Worms like dark, moist environments with a temperature between 55-77 degrees Fahrenheit. Worm bins can be placed outside during the summer, but they need to be brought in when the weather cools off. Good indoor places include: under the kitchen sink, in the basement, or in a heated garage.

### **What Kind of Worms Should I Use in My Bin?**

The best kind of worms for vermicomposting are redworms, either *Eisenia foetida* or *Lumbricus rubellus*. Redworms are also known as red wigglers or manure worms. Do not use earthworms or other garden worms. While they are great for your garden's soil, they will die in the confined conditions of a worm bin. You can buy redworms through the mail or at some bait shops. You will need about 1 pound of worms (about 1000 worms) for the 2' x 2' bin, and 2 pounds for the 2' x 3' bin.

### **What Do I Do About.....**

#### **Fruit Flies in the Bin?**

Remove banana peels and citrus materials from the bin until the fruit flies disappear. You can also build a beer trap to drown the flies. Burying fresh food waste underneath the drier bedding material (like newspaper) will help prevent fruit fly infestations.

#### **A Smelly Bin?**

Adding too much food or water at once can overload the bin and cause odors. Buy more worms to keep up with your food scraps, add fewer food scraps and/or add dry bedding materials like shredded newspaper to absorb the extra liquid. Also, consider drilling more holes in the bin to increase air circulation.

#### **Getting the Compost Out of the Bin So I Can Use It?**

It helps to know that redworms move away from light, and towards fresh food. You can harvest a bin by moving all of the compost to one side and filling the other side with fresh bedding and food, then waiting for the worms to move towards the fresh food. Or, you can shine bright lights on the surface of the bin, which will drive the worms down deeper, then harvest the top layer of compost.

#### **When is the Worm Compost Ready to Use?**

Finished worm compost is a black, moist material. You should not be able to tell what materials originally went into the worm bin. Worm compost, also called worm castings, is a very rich source of nutrients for plants. Sprinkle the compost on your houseplants, then water them. Mix a pound of worm compost in with 3 pounds of your favorite potting soil next time you're potting plants.

### More Vermicomposting Information:

See the below links for more information on using worms to help with your composting!

#### Wisconsin Department of Natural Resources

[A New Wiggle on Waste  
Composting with Worms](#)

#### University of Nebraska Cooperative Extension

[Vermicomposting - Composting with Worms](#)

#### Down to Earth-Worms

[Vermicomposting](#)

#### University of Wisconsin Extension - Solid & Hazardous Waste Education Center

<http://www3.uwm.edu/Dept/shwec/publications/publications.cfm> (Put in vermicomposting for the Keyword and click on Go)

#### Master Composter

<http://www.mastercomposter.com/>

#### Mary Appelhof's Site for Worm Composting Resources

<http://www.wormwoman.com/acatalog/index.html>