



Urban Harvest

Growing gardens. Enriching lives.

Composting with Worms

John Gardener

Do you compost? You may already understand the important role composting plays in growing bountiful gardens in harmony with nature, whether or not you have your own compost pile. If you're a seasoned composter, or if you're just starting out, why not kick it up a notch and try vermicomposting?

Vermicomposting is what people call composting when they let worms do most of the work. Like regular compost, vermicompost builds healthy soil by adding organic matter, nutrients, and a diverse set of beneficial microorganisms. Worm compost offers two additional benefits. It improves soil structure as worms eat their way through organic matter leaving behind a polysaccharide slime that acts on soil aggregates, the basic building blocks of a healthy soil. They also leave worm castings (worm poop) that act like homes for microbes. Quality vermicompost is mostly, if not all, worm castings.

There is an added benefit; worms are fun! Watching these prolific creatures work their magic fascinates kids and adults alike. Worms fill a niche between plants and pets. They're a lot livelier than azaleas, but you wouldn't want them sharing your bed like Rover does. Vermicomposting is more fun than composting because it requires less work. The worms mix and aerate the beds so you don't have to.

Starting Your Worm Bed

Getting your worm bed started is relatively simple. Just (1) build a bed; (2) add worms; (3) feed them, and (4) harvest your vermicompost.

1. Build the bed near your compost pile. Use boards, concrete blocks, or whatever else you have available to create a topless and bottomless box approximately 2.5 feet wide, 3.5 feet long and 1.5 feet deep – somewhat like a frame for a deep raised bed. Fill with 6 inches of partially decomposed compost.
2. Add two pounds of composting worms. You can purchase worms locally from Petco, or you can find links to mail-order online.
3. Feed your worms about two pounds of food. The worms can eat anything you would normally put in the compost pile but they prefer moister, more nitrogenous materials like fresh lawn clippings. Kitchen scraps are ideal, but avoid meats and oily or fatty foods. If you need more sources

for food, ask your grocer's produce manager to save his overripe fruit for you. Worms love coffee grounds. Starbucks is committed to recycling and will give you all the grounds you want.

The worms should eat their weight in food each week. If the food is not disappearing quickly, cut back. Overfeeding can cause problems. If you have more food than they can eat, put the excess in the compost pile. Each week spread the food over the worm bed. Then cover it with an inch or so of unfinished compost to keep out flies and other pests. The unfinished compost brings microbial life to the bed. Worms eat the microbes that are feeding on food you have provided.

4. Harvest when the frame gets full – about 90 days. Set aside the top six inches, which contain most of the worms and undigested food and use this part to start the next batch. What you have left will be the best soil amendment on Earth.

Ways to Learn More

If you'd like to learn more about worms and vermiculture, there are lots of books and online resources to turn to. Be careful. Like gardening books, many worm books are written by people who live in different environments than ours. For example, most books recommend raising worms in plastic bins, to be able to bring the bins indoors in winter. Here in Texas, worms in a black plastic bin will roast in our summer heat. Raising worms on the ground is the best, and simplest, method for the Houston area.

Start your research with the classic worm manual, *Worms Eat My Garbage* by Mary Appelhof. The best Internet source is Worm Digest at www.wormdigest.org. They produce a monthly newsletter, maintain an archive, and have extensive lists of related links. When you start surfing, get ready to sort through many sites to get quality information. I found a lot of information in an article by Jay Mertz of Rabbit Hill Farm in Corsicana, Texas.

If you find articles by Kelley Slocum, pay close attention. She provides well researched, clearly written vermiculture information. For example, the following excerpt says a lot in a couple of paragraphs:

"Castings added to the soil carry to the root zone a rich compliment of soluble plant nutrients and growth enhancing compounds, a diverse and populous consortium of microbial life and a substrate of organic matter harboring a storehouse of nutrients that are not lost to rain and irrigation. The plant is delivered an ongoing, reliable food source... released to the soil in a plant-available form."

"By inoculating the soil with the rich, diverse, microbial life present in good worm castings, the plant root is protected from disease and attack by root-feeding organisms. Many microorganisms exude compounds inhibitory to pathogenic organisms, further reducing the chance for pathogen blooms sufficient to cause plant damage."

What a poetic summation of the benefits of worm poop! I hope it inspires you to start a worm farm.