

WormEzine

Vol 1 June 2002

News and information from Mary Appelhof . . . about vermicomposting, worms, and other critters that live in the soil.

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For the Small Print, scroll to end.

They laughed when I said worms eat my garbage, but
I showed them how, and now thousands say the same thing. . .

A WORD FROM MARY APPELHOF

Welcome to my WormEzine!

This newsletter is for worm workers and worm lovers all over the world. You may have:

- a home worm bin to process your kitchen food waste
- a barn full of larger bins to sell worms and castings for market
- a flow-through vermicomposting system to produce high quality castings for the retail market
- several hundred feet of windrows to process the manure from a local racetrack, or
- a classroom worm bin with excited kids peering over the edge

Whatever your interest in earthworms, I hope to expose you to ideas, information, and resources that will increase your understanding of vermicomposting systems, the process, and the organisms. I welcome your comments, ideas and suggestions about what you would like to see.

To read the archives on the web, visit the following <http://www.wormwoman.com>

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I=====FEATURE=====

(Note: You may circulate this article in electronic or print form provided you do so without editing and give credit as follows: Copyright 2002 Mary Appelhof. In 2 parts, it is about 1700 words. Part II will appear in WormEzine 2.)

Worm Composting Solves a Problem, Yet is Educational and Fun

Have your kids ever complained about taking out the garbage? They wrinkle up their noses because the kitchen wastebasket reeks of banana peels and coffee grounds. And then they hold their nose with one hand while they quickly lift the lid on the garbage can to deposit the latest accumulation of non-recyclables, food waste, and messy plastic wrap.

Get rid of smelly kitchen wastebaskets and garbage cans by letting worms eat your garbage!

When you compost with worms, your family will embark on a lifelong adventure that will make your children eager to feed the worms. With guidance from my books and videos, you will see how having a worm bin in your home can give real-life opportunities to learn biology and ecology, as well as math, history, geography and language.

Worm composting basics

It's easy to do worm composting. You need (1) an aerated container, (2) bedding, (3) redworms, (4) and a proper environment. You bury organic waste in the bin. The worms, along with millions of microorganisms, chow down on the garbage and transform it into dark, earthy-smelling, nutrient-rich worm castings (worm manure). You can use these worm castings to fertilize plants in your home and your garden. The process is simple, convenient, and environmentally sound. It's also a wonderful and enriching family activity. After all, what kids don't like worms?

Containers should be aerated

Worm bins run the gamut from old steamer chests to plastic shipping totes to fancy multi-tiered commercial units. The most important thing is to provide aeration for the worms and microorganisms, which will live in the bin. This is usually accomplished by drilling holes in the sides, top, and/or bottom. My Worm-a-way® bin made of recycled plastic has aeration tubes which get air into the lower parts of the bin without having holes in the bottom. Homemade bins can be as effective as commercial units, and making your own can be a good family construction project. Worms Eat My Garbage gives instructions on how to build several kinds and sizes of worm bins. Building a bin

can be a project to gain experience buying lumber and hardware, measuring and assembling, using tools.

Bedding provides moist environment

Redworms need a dark, moist environment to live in. You can provide that by shredding newspaper, adding water to it, and putting that in the worm bin. They hide under the folds of paper (they don't like light), and they eat the bedding along with the food waste that you bury. Mixtures of materials with lots of cellulose (a source of carbon) make good additions to paper. These can include shredded leaves, compost, perhaps some hay and straw. The bedding should be damp, like a wrung out sponge, but not dripping wet.

Right kind of worm is important

You need to use the right kind of worms. You want worms that:
are used to processing large amounts of organic material,
are tolerant of a wide range of environmental conditions,
tolerate being disturbed, and
reproduce in your bin.

The best worm for this job in North America is the redworm, or *Eisenia fetida*, as it is known to scientists and knowledgeable worm growers.

A pound of worms (about 1000) can process half their weight a day. However, that doesn't mean that if you bury a pound of garbage in your bin today, it will be gone tomorrow. You will be burying perhaps 4 pounds of organic waste in your 20" x 24" x 12" (18 gallon) bin each week. Over 2-3 months you will have buried over 30 pounds of food waste. Towards the end of that time the food waste will be unrecognizable, the bedding will be gone, and you will have many more worms. Contents of the bin will look like rich, dark soil, and be teeming with microorganisms such as bacteria, fungi, protozoa, and nematodes which will help plants to grow when you harvest the worms and place the vermicompost around your plants.

You may enjoy collecting worms from your garden, or looking for nightcrawlers some rainy spring night, but don't put them in your worm bin and expect them to do the job that the little redworms will do. The soil-dwellers have their own jobs to do living in the soil, such as make tunnels to aerate it and get oxygen into the root zone so plants will grow better.

Part I of II. To be continued

2=====RESOURCES=====

A. Compost tea is the focus of a new listserv. Join this active discussion of the scientific aspects of brewing compost teas--recipes, machines, aeration, need for cleaning, measuring effects. Sign up at:
<http://lists.ibiblio.org/mailman/listinfo/compostteas>

B. Overhead transparencies of earthworm anatomy. For those of you who cover worm biology and want to teach proper terminology, this set of 6 provides clear, labeled diagrams of earthworm features. Included are segments, setae, clitellum, mouth, hearts, reproduction, cocoon formation, much more. Easier than drawing your own! For more information:

http://www.wormwoman.com/acatalog/Wormwoman_catalog_Posters_and_Transparencies_57.html

3=====HUMOR=====

A. It's official--it's a squirm. A press release issued after the recent International Composting Symposium in Columbus, Ohio, declared, "Avid worm composters have struggled for years with what to call the increasing hoards that are chowing down their kitchen wastes. 'Do you call them a herd, a bunch, a mass, a handful?' The awkwardness of description leads to the obvious solution and that is to declare: It's a Squirm of Worms."

Issued by the Composting Council of Canada, Executive Director Susan Antler said, "We've been having fun trying to figure this out for a number of years. I'm sure that this term will quickly be adopted by worm supporters around the world. No one would want to squirm out of this." For a copy of the full release, which you are welcome to distribute, send me an email at info@wormwoman.com.

4=====COMING EVENTS=====

A. ZERI TRAINING with Gunter Pauli. June 6-9, Santa Fe, NM. ZERI (Zero Emissions Research Initiative) is a systems approach that views waste as a resource; utilizes Nature's five kingdoms to develop both food stocks for local communities and also value-added businesses that generate revenue; and allows people, companies and communities to do more with what Nature produces rather than asking Nature to produce more. For more information, visit <http://www.zeri.org>. I initially came upon Gunter Pauli's work in a BioCycle article about combining mushroom growing and earthworm production as a way of handling spent grain from breweries in China. I feel very privileged to participate in this first United States ZERI Training.

B. MASTER GARDENER CONFERENCE in East Lansing, MI June 17-19. I will be exhibiting Mon. and Tue, and giving two sessions back-to-back, "Worm Bins and Compost Teas" on Monday afternoon. This conference is open only to active Master Gardeners. For info:

http://www.msue.msu.edu/mastergardener/Conferences/MG_Conferences.htm

C. INTERNATIONAL SYMPOSIUM ON EARTHWORM ECOLOGY 7 Sept. 1-6 in Cardiff, Wales. This will be the first major international earthworm conference since the Vermillennium, which was held in Kalamazoo, Michigan. For info:

<http://www.cf.ac.uk/biosi/worm2002/registration/Worm2002RegForm.pdf>.

D. VERMICO BEST MANAGEMENT PRACTICES IN VERMICOMPOSTING Oct. 10-11, 2002 in Portland, OR For info: <http://www.vermico.com/>

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