

Worm composting effective

By Michael Maciarelo
Delaware State University

Composting is so common today that it's hard to find a gardener without at least one compost pile.

The art of composting has progressed to the point where gardeners frequently deploy several methodologies to keep themselves supplied with rich black humus all year. My favorite method is vermicomposting, or composting with worms.

In this process, microorganisms begin to break down organic matter, and worms consume the microorganisms to produce nutrient-rich worm castings.

Under normal circumstances (in the soil), a worm produces its own weight in castings each day. Given an average of 2,700,000 worms per acre, that translates into an annual output of about 102,000 metric tons of worm castings per acre.

Vermiculture refines this process by using a worm uniquely adapted for the process, usually Red Wigglers (*Eisenia foetida*), and a container (worm composter) in which the composting process takes place.

Shredded newspaper is the most common substrate for worm composters. A great variety of kitchen wastes, such as banana peels, apple cores, potato skins etc., serve as the organic matter.

A mature worm composter has the equivalent population density of 6.5 to 8 million worms per acre and these worms are 2 to 4 times more productive than regular earthworms. As a result, vermicomposting is about eight times faster than a hot compost



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Vermicomposting, or composting with worms, is about eight times faster than a hot compost pile and about 30 times faster than a cold compost pile.

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From an environmental perspective, vermicomposting produces about 3,000 times less methane than hot compost piles, and about 1,500 times less carbon dioxide than a cold compost pile. Both methane and carbon dioxide are greenhouse gases.

Many people are attracted to vermicomposting because it is an odorless process that can be done in their basements, back porches, or even on the kitchen counter, frequently replacing the compost container. It is also much less labor intensive, producing a compost of consistent texture at a constant rate throughout the year.

New studies are starting to

show that vermicompost cannot only nourish plants, it can also help prevent plant diseases. Add a teaspoon (or small shovelful) to potted plants or transplanted seedlings. Work it into the soil when you're planting vegetable beds. Add a little to water and use within 24 hours as compost tea. A secret known only to gardeners with vermicomposters is to add a scoop of worm castings under vegetable transplants in the spring for a rapid initial growth spurt.

Using wormcastings as a side dressing to your plants throughout the growing season keeps them lush and productive.

For more information on composting with worms, including instructions on building your own inexpensive worm composter, go to <http://cars.desu.edu/faculty/mmaciare/worms>.