

Worm farming

Organic matter for recycling tends to present itself irregularly. One minute you have a few veggie scraps, the next a pile of weeds and clippings from the garden. Worm farms are one of the easiest and most productive ways of dealing with the ebbs and flows of organic waste generated by a household or community garden.

It is a matter of setting up a system that suits you and the amount of organic waste that you have. Then you can start producing a constant supply of high quality fertiliser with little effort.

Compost worms

Compost worms are different to the earthworms that till the soil. They are active worms that thrive on organic matter, eating through their bodyweight daily. In the process they produce a high quality fertiliser, rich in humates and beneficial microbes. Humates help build soil, holding nutrients and moisture in the soil rather than letting them leach out, and making them available to plant roots and soil microbes. Most pathogenic microbes are destroyed in a worm's gut, including the common human pathogens. Any plant material infected by viruses, eg tomatoes and other solanums, should not go into a worm farm. Weed seeds will also survive in a worm farm – indeed worm castings are the ideal germinating medium for seeds.

Kinds of compost worms

The common species used in worm farms are the red, tiger and blue wriggler. All are subtropical worms which prefer a temperature range in the twenties (Celsius). They require moisture, without being saturated, and protection from direct sunlight.

What do they eat?

Any organic matter, other than citrus peel, onion and garlic, is suitable. Make sure that pesticide residues are minimal and that manures contain no worming agents. Powdered dolomite is the other ingredient you can sprinkle on as you add matter to the worm farm or if the contents go sour.

A home for your wriggly friends

A worm farm needs to confine the worms and hold organic matter. It should hold moisture yet drain, be vermin proof, and allow easy access. The depth need only be 25-30 cm. Surface area (and feeding) will determine worm numbers and size. There are a number of commercially available worm farms, including "worm factory" and "can o worms".

These have a number of compartments that stack vertically and allow ease of worm management and harvest of the castings. The liquid that drains from worm farms is valuable for fertilising plants. There are other commercial systems that rely on the worms moving horizontally to manage them and harvest castings. Both systems are easy to make from a variety of containers.

Styrofoam containers can be readily adapted for a stacking system. Baths are useful for a horizontal system. I use two halves of a drum (cut lengthwise) mounted on a metal frame, one above the other. The top one drains into the bottom, which drains into collecting vessels. The harvested "worm wee" is used constantly to fertilise pot plants and the garden. Flywire screens cover the tops protecting the worms from vermin. This is important if you are adding any meat, eggs or milk as rats, mice and flies will follow if not excluded. Shade is important, particularly in summer. Mine are housed under a grapevine with shade cloth over the screens.

Setting up your worm farm

First put a bedding layer down. This can be compost or partly broken down organic matter and must drain freely. I usually use a 10 cm layer of semi-composted prunings then another 10 cm of compost. This is not spread evenly as the scraps go in the undulations. Water well, allowing a few hours for draining, then add worms.

Harvesting castings

Harvest castings by hand (squishy on fingers). To concentrate the worms in one part of the farm, feed and add water in one corner only for a week or so. The worms will head for this corner and the rest of the farm can be dug out and piled into a cone shape on a flat tray. The worms, not liking sunshine, will congregate at the bottom centre of the cone after an hour or so and the castings can be "skimmed off".

Resources

Further reading or other research before starting is recommended. Books you may find at your local library include

- A number of titles by Allan Windust, including *Worms Downunder* and *Worm Farming Made Simple-For The Professional*.
- David Murphy (1993) *Earthworms In Australia*, Hyland House
- Eric Wilson (2000) *Worm Farm Management: Practices, Principles, Procedures*, Kangaroo Press
- Amy Brown (1994) *Earthworms Unlimited*, Kangaroo Press

"Worm Digest" at www.wormdigest.org/ has loads of information on vermicomposting, including two page introductions for adults and for kids