

## Vermicomposting

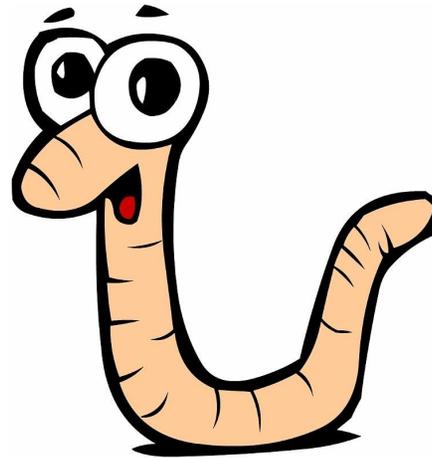
Worm bins are a great alternative method for composting kitchen and garden waste (vegetable peels, grains, baked goods, coffee grounds and paper scraps).

### WORM REQUIREMENTS:

- Worms will need a bin to live in. You can make your own or purchase a premade kit.
- Two pounds of worms are needed for each pound of kitchen waste added per day. Use only one of the two varieties of red worms that are adapted to composting scraps (*Lumbicus rubellus* and *Eisenia foetida*). Worms can be acquired at most solid waste facilities.
- Worms require bedding to live in. This can be made of shredded cardboard or newspaper, coconut coir or peat moss.
- Worms require 75% to 90% moisture content in both their bodies and bedding.
- Their ideal temperature is 55—77 degrees.
- Worms require good air circulation..
- Keep a 4-6 inch layer of fresh bedding on top and tuck new food into different areas of the bedding.
- A drip collection tray will be necessary to collect “worm tea” which makes a great plant fertilizer.
- Avoid overpopulation of worms by removing some of them periodically.
- Clean out bin once a year and add new bedding for a fresh start. The resulting compost can be added to your garden.

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*Compost Tea: According to the best and most recent research, compost tea, even when aerated, is of little use for crop plants, and is useless for shrubs, lawns, and landscapes.*



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# Composting



**WHAT IS COMPOSTING?** The natural process of decomposition and recycling of organic material into humus-rich soil.

**INGREDIENTS:**

Greens: generate high composting temperature to speed the process (grass & fresh plant clippings, food scraps, manures \*)

Browns: help eliminate odors (dry leaves, woody material, paper, cardboard, egg shell)

**COMPOST PILE LOCATION:**

- Out of full sun
- Good air circulation
- Away from tree roots
- Close to a water supply



**COMPOST BIN vs. PILE:**

There is a wide array of bins you can buy or construct. Any container with good airflow will work fine, but a simple pile in your yard works just as well. Piles should be at least 3 feet square. Tumblers make it easier to rotate. A container can keep pests away.

**DIRECTIONS:**

- Mix a ratio of 1:1 green & brown composting materials from the list to the right.
- Water each layer, but don't let the pile get soggy.
- Turn regularly or add a vent pipe with holes for better air circulation.
- To kill weed seeds/pathogens, pile must reach 140°.
- Compost is ready when it feels like good garden soil and has a sweet, clean aroma.
- Spread 1" thick on garden beds or mix into new plantings to improve soil structure.

**TROUBLE-SHOOTING:**

Bad Odor

Not enough oxygen - add a vent pipe or turn more often

Pile is too wet - let it dry out

Too many greens - add browns

Composting too slowly

Too dry - add more water and greens

Not enough oxygen - add a vent pipe or turn more often

Pests are getting into the pile

Consider adding a cover, bury food scraps in the pile, rotate more often

**Items you should not compost:**

- Meat or meat waste or bones
- Fats, oils, greasy food or dairy products
- Sunflower shells
- Weed seeds or fruit pits
- Pet wastes, human wastes
- Chemically treated wood products
- Pernicious weeds such as Morning Glory

**ITEMS YOU CAN COMPOST**

**BROWNS:**

- Non-diseased branch clippings without thorns preferably cut into 1/2" pieces
- Dry leaves
- Egg shells
- Hair or feathers
- Corn stalks and husks
- Straw and hay
- Fireplace ashes (sparingly to avoid altering soil ph)
- Sawdust & wood chips (except black walnut)
- Cardboard rolls, paper napkins, newspaper
- Breads and grains
- Clothes dryer or vacuum cleaner lint

**GREENS:**

- Grass or plant clippings (no chemicals/fertilizers)
- Vegetable and fruit scraps
- Animal manure (except human, dog or cat) \*

*\* Beware of animal manure from unknown sources. Some chemicals can pass through an animal's digestive tract and still have potency. All manures should be aged for one year before use in a compost pile to remove pathogens.*

