Introduction to Vermicomposting



©WormMainea • Mark Follansbee



- WORMS: I recommend red wiggler worms (*Eisinia fetidia*). They are afraid of light, tolerate a high proportion of food in soil, eat a lot of food, and eat a wide variety of food. I will discuss other worms later.
- **BIN:** Worms like a dark, moist (like a wet sponge), and quiet area (free from vibrations). I recommend an 18-20 gallon bin. Too small and the worms have nowhere to flee from food like citrus and too big and the bin can be HEAVY when full.
- **BEDDING:** Any shredded organic material for bedding: shredded paper (newspaper is great, cardboard, peat, & coconut coir also work) or other organic waste materials you have on hand.
- FOOD SCRAPS: Same as your outdoor compost pile. No meat, no oils, no dairy, no bones; no metal items (e.g., staples from tea bags).



What do worms eat?

Cores

Vegetable Scraps

Fruit Rinds and Peels

Paper & Cardboard

Breads, Cereals

Coffee grounds & filters

Tea Leaves, Bags

Egg Shells

Meat, Fish, Bones
Dairy Products
Grease
Vegetable Oil
Pet Wastes
Salt
Dirt from Outside
Plastic



- Latin names: Eisenia fetida (foetida). Common names: red worm, red wiggler, tiger worm, manure worm
- I've found that red worms are best for indoor composting:
 - reasonable temperature range for indoors
 - don't like light (won't escape)
 - consume at good rate
 - tolerant of handling/mixing
 - wide range of food types





Reproduction rate under ideal conditions is 10-12 weeks.

- Space
- Soil temperature
- Food



Making a Worm Bin







Step 1. Gather materials

- Plastic or wood bin20-50 gallon size
- Drill, saw, or knife
- Screening material
- Tape or glue

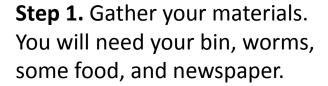
Step 2. Cut holes in top of bin. As shown, 4-6 holes about 2" in diameter will work for a 20 gallon bin. Smooth holes with sandpaper.

Step 3. Cut screening material (screen, landscape fabric, pantyhose) to cover holes and secure with glue or tape.

You've made a worm bin!

Starting Your Bin





You should have about half as much food as you have worms.



Step 2. Put your food in first.

Food always goes in the bottom of your worm bin.



Step 3. Add your worms. Put them directly on top of the food.

The next time they're fed, put the food in the adjacent corner.

Starting Your Bin

(continued)







Step 4. Add newspaper. Fill your bin to within about 3-4 inches of the top (push down gently to be sure the newspaper is in contact with the worms).

Step 5. Put a sticky note on the bin to mark where you just put the food.

Feed in the adjacent corner next time.

Collecting Vermicompost



full of fresh bedding (newspaper) and begin again.



Take your bin outside on a warm, sunny day and dump it onto a tarp. Scoop soil off the top and walk away so the worms can dig deeper. Continue doing this until you have a pile of worms and a mound of worm-free soil. Put the worms back in your bin



- More information on vermicomposting can be found on my website: www.WormMainea.com
 - My website has FREE information and instructions to make your own bin, separate castings and make vermicompost tea.
- See my blog FMI: <u>www.wormmainea.blogspot.com</u>
- I sell worms (\$20/pound bed run) and worm bins (\$20 for 18 gallon plastic bin);
 Combo deal: 1 lb. of worms and a bin for \$35.
- Contact me at <u>WormMainea@maine.rr.com</u>

Thank You





Step 1. Take about 1 pound of castings and place in a sock or bag. Place in a 5-gallon bucket of water and swish it around for a few minutes.



Step 2. Let it sit for a day or two and swish it around when you think of it. Dilute 2:1 (5 gallons makes 10) and use to water your plants.



Overview and Tips for Success

- Worms thrive on fruit and vegetable peelings, cores, spoiled parts, greens; coffee grounds (including the paper filter); and egg shells (no whites or yolks). This is all they need.
 - NO meat, no oils, no dairy, no bones, no salt, no plastic or metal items.
- Bury the food in a corner at the bottom and change corners with each feeding in a clockwise (or counter-clockwise) rotation. (Mark starting corner.)
- Worms also need bedding (shredded newspaper) to absorb excess moisture.



- Bugs: I recommend you don't add anything from outdoors to your worm bin (no outdoor soil) other than food waste. Soil can harbor insect eggs and larvae. If you don't put them in your bin, they won't be there.
 - Also, remember to bury your food in the worm bin and keep your collection container covered to prevent fruit flies.
- Put the worm bin in an area where they will not be disturbed. Worms like dark, quiet areas with stable temperatures (worms tolerate 40-90°F and thrive at 65-75°F).
 - Basements or cellars are ideal.
- Your senses are your best guide for maintaining your worm bin.



Does it attract bugs? Does it smell?

No and no. If you cover the newly added food with bedding, don't add too much food, and keep your bin from getting too wet (add extra bedding to absorb excess moisture), your worm bin will not attract bugs or smell. Don't water your worm bin or add soil from outside!

Will my worms get loose?

<u>No</u>. Your worms will be happy in the bin and won't escape if you use a bin with screens (see Worm Bins) and follow dos and don'ts. Your worms will be happy in the bin and won't leave (red wigglers are afraid of light).

Frequent Questions

(continued)

- Can I use worms from my yard?
 - No. Worms commonly found in Maine residential yards are night crawlers (*Lumbricus terrestis*) and field worms (*Allolobophora caliginosa*).
 - Field worms generally cannot be used in indoor worm bins because they burrow deep and like it cool (50s).
 - Night crawlers can, but they have special requirements that make them a bit more difficult (e.g., top feed, permanent burrows, supplement feed with corn meal).

Frequent Questions

(continued)

- How do I PREVENT a fruit fly problem?
 - Make sure your compost scraps are covered.
 - Bury all food deep in your worm bin and keep the bedding layer at least 3" deep.
 - If you have fruit flies where you keep your compost scraps,
 freeze the scraps or take them to your outside compost pile.
- What can I do with the worm compost?
 - Worm compost is great fertilizer for indoors and outdoors!
 Use directly as fertilizer or soil amendment OR make liquid vermicompost tea. Not hot composted may have seeds.