

# HAMILTON COUNTY ENVIRONMENTAL SERVICES

## Vermicomposting Troubleshooting

SYMPTOMS	CAUSED BY	SOLUTIONS
Fruit Flies.	<ul style="list-style-type: none"> <li>Food waste not buried under bedding</li> <li>Food waste left to collect too long in kitchen</li> </ul>	~correct the immediate problem #prevent it from occurring in the future  ~Fruit fly trap ( <i>Worms Eat My Garbage</i> , p. 63). ~Hang a sticky fly strip from ceiling. #Bury all food waste well
Water collecting at bottom of bin.	<ul style="list-style-type: none"> <li>Poor ventilation where stored.</li> <li>Feeding too much food waste to worms</li> </ul>	~Leave lid off for a couple of days. ~Fluff bedding. ~Add dry bedding to bin. *Change location to better ventilation. *Cut back on amount of food.
Bedding drying out too quickly.	<ul style="list-style-type: none"> <li>Too much ventilation.</li> <li>Lid left off worm bin</li> </ul>	~Spray a little water in the bin. #Keep lid on #Change location of bin.
Smell; bad odor.	<ul style="list-style-type: none"> <li>Waste not buried well.</li> <li>Too much food waste added.</li> <li>Fish, meat, poultry or dairy products added to bin.</li> </ul>	~Stop feeding your worm bin for a week and add a little dry bedding. *Bury all food waste. #Do not feed fish, meat, poultry or dairy products to the worms.
Mold.	<ul style="list-style-type: none"> <li>Molds can develop as a natural sequence in the composting process.</li> </ul>	~Break up mold spores and turn under. #Keep acidity of the bin within a pH range of 6-8, (optimal for fungi is 4-6).
Worms crawl away, (very rare).	<ul style="list-style-type: none"> <li>Initial shock to new environment.</li> <li>Something toxic was fed to worms or sprayed near the bin.</li> </ul>	~Leave lid off a day or two and leave a light on (worms do not like the light and will remain in the bin).

## WORMS

Red worms are ideal because they:

- Quickly process large amounts of organic matter
- Reproduce rapidly and are disease-free
- Are readily available
- Normally live among organic matter
- Tolerate temperatures from 50-80 degrees

Red worms can be purchased locally for \$12.00 a pound from Bobby Trombly at 3030 Marshall Avenue in Clifton (751-6183) or Grailville Conference Center in Loveland (683-2340).

Red worms may also be mail ordered from the following locations:

- Redworm Breeders, Bronwood Worm Gardens, Bronwood, GA 31726 (\$14.95 a pound)
- Cape Cod Worm Farm, 30 Center Ave., Buzzards Bay, MA 02532 (\$14.00 a pound)

## WORM FOOD

Worms will eat anything organic. Examples include:

- vegetable and fruit waste
- plate scrapings such as macaroni, spaghetti, potatoes
- spoiled food such as baked beans, moldy cottage cheese, leftover casserole
- tea leaves & coffee grounds

(a sour odor can develop with spoiled food but will cease after it's broken down - approx. 2 to 3 days for an active worm bin)

### Do Not Use:

Meat wastes and other fatty foods can cause odor and pest problems!

## WORM HOME

### Container

Use a wooden box or plastic bin between 12"-16" deep and include the following:

- cover/lid (keeps light out and moisture in)
- bottom tray (holds excess liquid)
- a non-toxic liner surface
- ventilation holes on sides and drainage holes on bottom

### Bedding

Worms eat and live in the bedding, which also allows oxygen to circulate and helps retain moisture.

### Materials

Dried leaves, shredded newspaper, or aged sawdust which has been moistened and a handful of soil to provide grit for the worms' gizzards and microorganisms.

## END RESULT...VERMICOMPOST

In three to six months, food scraps and bedding will be converted to a dark, rich material loaded with natural fertilizers. Vermicompost contains nutrients and helps retain moisture in soil.

Its many uses include:

- Mixing with potting soil for house plants
- Mixing with starter soil for starting and transplanting seeds
- Topdressing on flower and vegetable beds

## WORM BIN DIRECTIONS

1. Drill holes in the bottom and sides of a plastic bin to provide adequate drainage and ventilation. For a wooden bin, use vent holes toward the top and drainage holes in the bottom. Place a tray under the bin to capture excess liquid.
2. Place the bedding of moist dead leaves and moistened newspaper in the bin. Add a handful of dirt obtained from outside and mix in with the bedding. Bedding must be kept moist at all times since 75 percent of a worm's body is water. The water to bedding ratio should be 3:1.
3. Put the red worms in the bin. Use 1/4 lb. of worms for every cubic foot of space.
4. The worm to garbage ratio is 2:1. Worms do not have to be replaced; they will multiply in time. Bury kitchen scraps under the bedding to avoid gnats and fruit flies.
5. Place a cover on the bin to retain moisture and block out light. If there is too much moisture, take the lid off for one day.

## HARVESTING THE BIN

After food scraps and bedding are converted into vermicompost, empty vermicompost onto a plastic sheet in sunlight and divide into six separate piles. As worms migrate to the bottom of the pile to avoid light, scrape off the vermicompost.