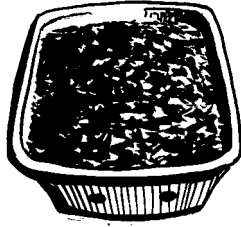


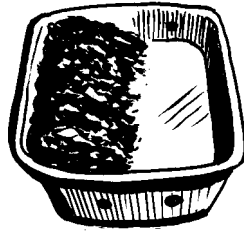
Harvesting your vermicompost

For more detailed information, see www.nyccompost.org.

Step 1. When the bedding starts to resemble dark, crumbly soil (usually in one to four months time), it is time to harvest your vermicompost.



Step 2. Move all the contents over to one side of the worm bed.



Step 3. Add new dampened bedding to the empty side, and start placing food scraps on that side.



Over about a one-month period, most of the worms should move over to the new bedding, allowing you to scoop out the relatively worm-free vermicompost. Vermicompost starts becoming toxic to the worms if it's left in the worm bin for too long.

How to use your vermicompost

Vermicompost is an excellent source of both slow-release and immediately available nutrients. When you transplant, throw a handful into the hole before you plant. You can also mix vermicompost into the top layer of soil for your potted plants.



Where to order worms

ARBICO
P.O. Box 4247
18701 N. Lago Del Oro Parkway
Tucson, AZ 85739
phone: (520) 827-2847
e-mail: ARBICO@aol.com

Beaver River Association
RRI, Box 100
Pawlet, VT 05761
phone: (800) 325-2109
e-mail: riwrigger@aol.com

Bountiful Gardens
18001 Shafer Ranch Road
Willits, CA 95490-9626
phone: (707) 459-6410
e-mail: bountiful@zapcom.net

Cape Cod Worm Farm
30 Center Avenue
Buzzards Bay, MA 02532
phone: (508) 759-8664

Flowerfield Enterprises
10332 Shaver Road
Kalamazoo, MI 49024
phone: (616) 327-0108
e-mail: nancy@wormwoman.com
web: www.wormwoman.com

Gardener's Supply Co.
128 Intervale Road
Burlington, VT 05401
phone: (800) 863-1700
e-mail: info@gardeners.com
web: www.gardeners.com

Harmony Farm Supply
3244 Gravenstein Highway
North Sebastopol, CA 95472
phone: (707) 823-9125
e-mail: info@harmonyfarm.com
web: www.harmonyfarm.com

Jim Heberle
3815 Route 96
RD #2
Shortsville, NY 14548
phone: (716) 289-4708

Lake County Worm Farm Inc.
2095 Big Valley Road
Lakeport, CA 95453
phone: (707) 278-0320
e-mail: wormfarm@pacific.net

Organic Renewal Enterprises
c/o Lower East Side Ecology Center
P.O. Box 20488
New York, NY 10009
phone: (212) 477-4022
e-mail: oreinc@earthlink.net

Peaceful Valley Farm Supply
P.O. Box 2209
Grass Valley, CA 95945
phone: (888) 784-1722
web: www.groworganic.com

Rabbit Hill Farm
288 S.W. C.R. 0020
Corsicana, TX 75110
phone: (903) 872-1488
e-mail: rhf@airmail.net

Rainbow Worm Farm
24700 County Road
Davis, CA 95616
phone: (530) 758-9906
web: www.rainbowwormfarm.com

Triple Z Ranch
1639 Calzada Avenue
Santa Ynez, CA 93460
phone: (805) 688-9325

Unco Industries, Inc.
7802 Old Spring Street
Racine, WI 53406
phone: (800) 728-2415
web: www.vermiculture.com

Vermi-Technology Unlimited
(formerly Solano Worm Farm)
P.O. Box 130
Orange Lake, FL 32680
phone: (352) 591-1111
web: www.vermitechnology.com

Willingham Worm Farm
Route #1 Box 241
Butler, GA 31006
phone: (912) 862-5545

Worm's Way
7850 N. Highway 37
Bloomington, IN 47404
phone: (800) 274-9676
web: www.wormsway.com

The Department of Sanitation does not endorse any of these suppliers.

For more information

For more information on composting, see www.nyccompost.org, or contact:

The Bronx Compost Project
The New York Botanical Garden
200th Street and Kazimiroff Boulevard
Bronx, NY 10458
compost helpline: (718) 817-8543
fax: (718) 817-8018
e-mail: bronxcompost@nybg.org
web: www.nybg.org

Brooklyn Urban Composting Project
Brooklyn Botanic Garden
1000 Washington Avenue
Brooklyn, NY 11225
compost helpline: (718) 623-7290
fax: (718) 857-2430
e-mail: compost@bbg.org
web: www.bbg.org

Manhattan Compost Project
The New York Botanical Garden
200th Street and Kazimiroff Boulevard
Bronx, NY 10458
compost helpline: (718) 817-8543
fax: (718) 817-8018
e-mail: manhattancompost@nybg.org
web: www.nybg.org

Queens Compost Project
Queens Botanical Garden
43-50 Main Street
Flushing, NY 11355
compost helpline: (718) 539-5296
fax: (718) 463-0263
e-mail: compost@queensbotanical.org
web: www.queensbotanical.org

Staten Island Compost Project
Staten Island Botanical Garden
1000 Richmond Terrace
Staten Island, NY 10305
compost helpline: (718) 273-0629
fax: (718) 422-3645
e-mail: sibgcompost@erols.com
web: www.sibg.org

Indoor composting with a worm bin



A guide to composting in New York City apartments



The Department of Sanitation has funded compost education projects at the City's Botanical Gardens since 1993.
www.nyc.gov/sanitation
www.nyccompost.org



Indoor composting with a worm bin

If you live in an apartment and don't have access to an outdoor composting area, you can still recycle your food scraps by using red worms in a worm-bin composting system. **One red worm processes half its own weight in food scraps every day!** Worms transform food scraps and decaying plant material into an excellent plant fertilizer and soil amendment called **vermicompost**.

Indoor composting requires some time and attention—it's not troublefree, or for everyone. To start recycling your food scraps with worms, you need to buy or construct a worm bin and obtain a few pounds of red worms. See the back of this brochure for places to order worms.

Red worms

When you order red worms from a supplier, you will probably get *Eisenia fetida* or *Lumbricus rubellus*, species that will effectively recycle your food scraps and will thrive in a worm bin. These are not to be confused with nightcrawlers and other garden worms, which are usually brown or gray in color.

The number of worms you need depends on how many pounds of "worm food" you and your household generate each week. If you stock your bin with two pounds of worms (about 2,000 worms), they should be able to process a pound of food scraps a day, or seven pounds a week. The amount of worms you need dictates what size worm bin you use.

The worm bin



You can keep your worm bin in your kitchen, basement, or garage all year round, or it may stay outdoors at temperatures between 55° and 75°F. You can buy a worm bin or you can make your own, by building or adapting a

wooden or plastic box. Follow these steps to create a worm bin:

Step 1. A surface area of about one square foot is needed for each pound of worms. The box should be shallow (8 to 12 inches deep), and should have a lid to keep conditions moist and dark.

Step 2. Drill at least ten half-inch holes in the top and sides for air circulation and drainage.

Step 3. Add about 8 inches of moistened bedding materials, such as one-inch strips of newspaper, potting soil, or leaves.

Step 4. Sprinkle water onto the materials to achieve a moisture content equivalent to that of a wrung-out sponge.

Step 5. The food scraps you add should keep the bedding moist, but it may be necessary to remoisten the bedding with water from time to time.

Step 6. Add food to the bottom of the bin, tucked under most of the bedding and leaving no food exposed on top.

Step 7. When you add your worms, lay them on top of the bedding and leave the lid off the worm bin for an hour. Since the worms are sensitive to light, they will burrow into the bedding.

How to feed your worms

You can feed your worms small amounts every day or their whole week's food supply at one time. Large items, such as broccoli stalks, should be cut up. Move some bedding aside and add your food



scraps. Then cover the food with new, dry bedding. Each time you feed the worms, bury the food scraps in a different part of the bin. Worms will eat both the food and the bedding, producing a dark, rich product called vermicompost. Add more bedding as older bedding disappears every month or so.

What to feed your worms

Red worms eat fruit and vegetable scraps, crushed egg shells, coffee grounds, tea bags, and leftover bread and grains. They should not eat meat or fish scraps, or fatty, oily foods.

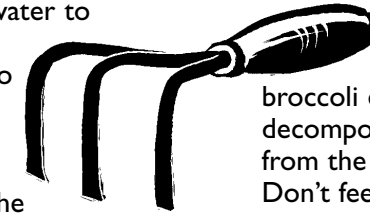


Troubleshooting

FRUIT FLIES usually become pests in and around worm bins. Taking the following steps to avoid an infestation is easier than getting rid of one:

- **Be sure to bury food scraps** under the bedding.
- **Wash all fruits** and fruit peels in warm water to remove fruit fly eggs on the skins. Or freeze food scraps before adding them to the bin.
- **Avoid overfeeding** and don't keep the bin overly wet.
- **Add plenty of dry bedding** to prevent the bin from becoming wet.

If fruit flies do become a problem, you can use fly-paper traps or a homemade fruit-fly trap (see box, below). You can also stop adding fruit to the bin until the problem subsides. House flies should not be attracted to your bin if you cover the food scraps with bedding material.



If the problem with your worm bin can't be controlled, the best solution may be to harvest the worms and start a new bin from scratch, using what you've learned from your experience to create a better bin. Call the compost helpline numbers at the Botanical Garden nearest you with any problems.

ODOR PROBLEMS may result from one of the following:

- **The bin is too wet.** Solve this problem by not adding any water or foods with a high percentage of water (such as melons) and by adding and thoroughly mixing in more dry bedding.
- **The bin doesn't get enough air.** Anaerobic bacteria (bacteria which thrive without air) are odorous. To aerate, add fresh bedding and mix bin contents daily. Add more air holes to the bin if possible.
- **Food in the bin is naturally odorous.** Some foods such as onions and broccoli do not always smell pleasant when they decompose in the worm bin. Simply remove from the bin any food source that smells bad. Don't feed meat, bones, dairy, and oil products to the worms because these items become rancid when decomposing.

DEAD WORMS decompose rather quickly. If you don't monitor the following conditions, you can have a bin with no worms before you realize it:

- **The bin is too wet**, and the worms are drowning.
- **The bin is too dry**, and the worms are drying out.
- **The bin is not getting enough air**, and the worms are suffocating.
- **The worms aren't getting enough food.** Once the worms devour all of their food and newspaper bedding, they will start to eat their own castings, which are poisonous to them. It's time to harvest.
- **The bin is exposed to extreme temperatures.** The worms thrive in temperatures between 50° and 80°F.
- **An overpopulation of mites may be interfering with the worms.** Some mites are fine, but if you notice an abundance, take out the food where the mites are congregating. Add dry bedding to reduce the moisture level.

Trapping fruit flies

Here are two kinds of fruit-fly traps you can make yourself:

1. Funnel fly trap (left). Pour some apple cider or beer into a glass jar and add a drop of detergent. Cut the corner off a plastic sandwich bag and place it into the jar; secure the plastic-bag "funnel" with a rubber band around the rim of the jar.

2. Bottle fly trap (right). Cut a small plastic water or soda bottle in half. Fill the bottom half with some apple cider or beer and a drop of detergent. Turn the top half upside down and place it into the bottom half so that the neck forms a funnel. Secure the two halves with tape.

