



CARE OF RED WIGGLERS (*Eisenia fetida*) and STARTING A HOMEMADE WORM COMPOSTING BIN

Thank you for buying our red wigglers (aka redworms, brandling worms, panfish worms, trout worms, tiger worms, or red Californian earthworms). They are packed in dampened coconut coir (dehydrated coconut fiber), a sterile, practical and light weight foodstuff in which worms can travel and start their new lives. If you will not be placing them in your compost bin in the next 12 - 24 hours, or if it's very hot, it's a good idea to store them in your refrigerator. Store them on the top shelf in the front, the warmest place of a refrigerator, so they won't risk getting too cold.

We recommend keeping your worm bin indoors (a basement location is ideal, cool in the summer and warm in the winter). Worms will quickly expire in extreme heat (over 90-95°) and extreme cold (under 25-30° -- unless the worms can burrow adequately into the interior of the bin or even underground if the bin is set on soil). If the weather is extremely hot or cold and we are shipping the worms to you, we package them drier than customary, in order to provide extra insulation and to reduce the stress resulting from extremes in temperature. It is possible for worms to lose up to one third of their body weight during shipment, but they will quickly gain it back when introduced to their new home.

Place them in your bin during a temperate part of the day, and leave the lid off (even shining a light onto the surface), until they have had a chance to burrow under the comforting shade of the top layer in your bin. Worms will sometimes "wander" when first introduced to a new bin, so check on them several times in the first few days.

INDOOR COMPOSTING

MAKING A HOMEMADE WORM BIN

Any bin or barrel that keeps worms in and offers drainage and sufficient oxygen is appropriate for the long term survival of worms. You'll need two bins, one to contain the worms and compost, the other to nest the first bin in and collect any excess water. Plastic totes as small as 2' (wide) x 2' (high) x 3' (long) will well serve the composting needs of a small household. For such a sized bin, you can start with ½ or 1 lb. of worms, which will reproduce over time to many more worms. A tight fitting lid assures that your worms cannot escape, and a half dozen or so small holes (use a ⅛" bit) must be drilled in the lid to allow the worms enough oxygen. Also be sure to drill holes (6 or so ¼" sized holes) in the bottom of the bin to allow for drainage. If you're handy, add a plastic spigot (available in the plumbing section of your local hardware store) to your bottom "nesting" bin, in order to easily drain off any leachate, a valuable component of your worm compost (vermicompost), though don't confuse leachate with "worm tea." There are many containers on the market made specifically for worm composting (vermiculture). Larger containers will require more worms – generally 1 sq. foot of surface area will support 2 lbs. of worms working at maximum capacity, which can consume their weight in food per day.

ADDING BEDDING

We recommend starting your bin with bedding made from shredded newspapers or dried leaves collected in the fall, and compost or good garden soil. Tear newspaper in strips approximately 1½" wide. You can use a leaf shredder to help process dried leaves or get shredded leaf mulch from a garden supplier. You will need about 1 - 2 pounds of shredded paper or leaves for the container described above: Lay this in the bottom of the container. Next spread a layer of 1 - 2 gallons of compost or garden soil and sprinkle on water. The bedding should be moistened to the "firm ball" stage, i.e., about 65% water -- when squeezed, water droplets (not streams) will form and when released it will form a ball and not crumble apart. The bedding should never be so wet that a lot of water drains out of the holes in the bottom of the bin. Red wigglers are surface feeders and only the top 6" or so need to be damp. Ideally the bottom of the bin can be fairly dry.

ADDING AND CHECKING ON YOUR WORMS

Spread your worms and the bedding they came in over the moistened bedding. The worms should disappear into the bedding in 10 - 15 minutes. As explained above, the worms will have a tendency to try to crawl out when first put into a new bin, so you might need to keep a light on over them at first to prevent them from escaping. Red wigglers will usually settle down happily into their new home within 24 hours. Again, a tight-fitting, vented lid is a necessity.

It is normal to have worms crawling up the sides and getting under the lid of a plastic bin. They like to be in the condensation that forms on the sides and lid of the bin. If you want to get them back into the bedding, remove the lid and tap on the sides of the bin and lid. Light will force them under the bedding, and once the sides and top of the bin dry out, the worms will stay burrowing under the bedding. Sometimes rainy weather and sustained low pressure systems send worms to the surface en masse, and sometimes their reproductive cycles find them squirming together on or just under the surface of the bedding.

FEEDING YOUR WORMS

It is important to feed your worms approximately 50% “brown” or carbon rich material (paper or leaves) and 50% “green” or nitrogen rich material (kitchen food scraps, the manure of vegetarian pets, non-woody garden clippings, etc.). Your worms will consume any kind of biodegradable matter except materials containing excess oil or chemicals. **You should add food to your new worm bin right away.** We recommend cutting up scraps into small sizes before feeding your worms to aid digestion. Also, after adding food, put a thin layer of paper or dried leaves on top, as this will aid in their surface mobility and it helps control odor.

SUGGESTED: fruits, vegetables, coffee grounds, tea bags, eggshells and any vegetable matter.

NO: meat, bones, salt, vinegar, cooking oils or dairy products. LOTS OF SALT WILL KILL YOUR WORMS!

A worm bin described above (2' x 2' x 3') will handle about 5 - 6 pounds of organic waste per week but we suggest starting more slowly. Again, to encourage decomposition, you might want to finely chop or even blend the material before adding it to the bin, in a thin layer randomly spread on top (a compacted, thick wet layer can asphyxiate the worms), followed by a layer of leaves or paper. It is often practical to have an outdoor compost bin in addition to your indoor worm bin. This will help handle the kitchen waste (plus garden and lawn waste) your household is producing, rather than overwhelm the worms with too much green matter.

WETTING YOUR WORM BIN

It is important to occasionally wet the surface of your worm bin to the “firm ball” stage described above, about once every 1 -2 weeks or at feeding times. Keep a spray bottle next to your bin just for this purpose. It is important not to use water directly from the tap, as municipal water contains trace amounts of chlorine. (You can use well water, rain water, or bottled water.) By allowing tap water to sit for 24 hours, the chlorine will dissipate.

LEAVING YOUR WORM BIN ALONE

You needn't mix the top layers of the bin, as worms work best undisturbed.

HARVESTING

Your worm bin should be ready to harvest in about 2 - 3 months. You can use the “window screen sort” method described below, or: 1) simply scoop out the top layer of worms and partially digested food from the top of the bin, 2) store the worms in a spare bucket or bin, making sure they are safe and well-aerated, 3) collect the finished compost from the bottom of the bin, and then 4) quickly start a new bin with the worms, with new layers of food and bedding material. Do this carefully and quickly, as worms that are overly concentrated can asphyxiate. You might need to dry the harvest vermicompost, placing it in a thin layer on a tarp in the sun.

SORTING WITH A SCREEN

When it's a month or so before you want to harvest, snugly set a section of ¼” or ½” wire mesh over the top of the composted mass in your container (cut the mesh 3 - 4” wider than the bin all around, with the corners cut and bent upward so that it's easier to grab), then place layers of fresh bedding and food on top of the screen. The worms will squeeze through the screen as the food runs out below and seek out the fresh food above. After waiting approximately one month, take hold of the screen by the edges and lift it out. Harvest the finished material you find at the bottom of the bin, and then dump the upper layer of partly composted material onto the bottom of the bin to begin building new layers.

OUTDOOR COMPOSTING

Red wigglers can also be used in an outdoor compost pile. It is best to have the pile in constant shade, for instance on the north side of a structure or under mature trees. Release your new worms in the cool of early morning or late afternoon. Simply dig a shallow hole in the middle of the compost pile, spread the worms along with the bedding in which they came, and then cover the hole with 1 - 2” of loose compost or dried leaves. The worms will naturally seek out an area of the pile that is the right temperature. During cold months they will migrate into the center where the temperature is generally warmer, and in warm months they will migrate to the borders of the pile, since the center of the pile will be too hot for them.

REPRODUCTION

Red wigglers produce numerous yellowish, lemon-shaped cocoons, each of which contains several eggs that will soon hatch into tiny young worms. In a successful environment, your worms will reproduce enough to divide your container and start a second worm box within as little time as six months.