

# Care and Maintenance of your 3' diameter Worm Bin

**Location-** Your bin should be set up outside, in an area that receives summer shade in the afternoon, and is protected from winter frosts. Generally, locating it on the north side of a building, under a shade tree, or in and around side entrances will provide this.

**Leveling and Drainage-** Set your bin up in a level spot. The bin is designed to leach out excess liquid (leachate), so it is best to set wood chips on the ground under the bin. This will absorb the moisture. If you need to set the bin up on concrete, you may want to buy a round plastic water heater pan (at the hardware store) and place it under the legs of the worm bin, then fill it with wood chips. Otherwise, you may stain the concrete.

**Assembling-** Place the plastic drum over the studs on the table top frame, and secure them with 15/8" screws. This holds the bin to the frame. Use care in moving the bin once it is secured. Ideally, carry it by lifting from the plywood table frame, not by grabbing the sides of the plastic drum, especially if there is material inside the bin.

**Set-Up and Bedding** - Add a 4" layer of bedding to the bottom of the bin. Bedding can be moist shredded paper, cardboard, straw, rice hulls, a well-aged moist compost or a mix. The material, when squeezed, should produce a couple of drops of water, so wet it down sufficiently.

**Add the worms and cover mix-** Place at least 3 1/2 lbs. of worms in the bin. The bin is designed to support up to 15 pounds of composting worms without overpopulating. You only need 3 1/2 lbs. of worms to start, as they will double in population every three months. After the worms are placed in the bin, wait a few minutes. You will notice that they disappear below the surface. Add about 1-2 inches of "compost mix".

**About the Compost Mix-** The Compost Mix is a carbon source for your worm bin. It will reduce fruit fly access and odor problems. You can use shredded paper, rice hulls, shredded leaves, shredded cardboard, sawdust shavings from clean wood, or a combination of one of these items and an aged or sterile soil such as potting mix. You should store this material in a can with a lid to keep it clean and dry. Most worm bin sites will use a plastic trash can with a good lid, and will place a scoop inside the trash can.

**Worm Chow-** This is a mix of "vitamins and minerals" for your worms. It is essential to add some grit for the worms' digestion in the form of ground oyster shell, fine sand or rock powder. Added to this can be any combination of kitchen flours (oat, wheat, corn, etc.), whole/refined/malted and organic fertilizers (kelp meal, cottonseed meal, etc.). Just a couple of tablespoons of the mix can be dusted on top of their food once a week and moistened. The flours and fertilizers provide protein and help boost the population growth.

**About Temperature-** Once the contents are set up, you can purchase a compost thermometer and check temps occasionally. The bin temperature typically ranges from 50 F to 90 F. The ideal range is 60F to 80F.

**Install the Lids-** Place the lid on the bin, followed by the shade cloth lid. Make sure the shade cloth lid elastic fits securely in the first rung of the bin. The shade cloth elastic is

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our standard design. If you encounter problems with raccoons accessing your bins, you can exchange it for our shade cloth lid with buckle and belt.

**Feeding Sequence-** Gather kitchen and lunch food scraps and feed the worm bin once or twice weekly. If feeding daily, it is important to feed in different areas of the bin each day to disturb the worms as little as possible.

## **Feeding Routine:**

Remove the lids.

With a forked trowel, move a 2" deep layer of existing material to one side of bin.

Add food scraps.

Replace the material to cover the food scraps you just added.

Add enough Compost Cover to cover the food scraps and material.

Replace the two lids.

Make sure lids are secure, on both worm bin and compost mix can.

**Don't overfeed the worms!**- The 3' diameter worm bin you purchased is designed to handle 20-25 pounds of food scraps weekly.

## **Harvest:**

Typically, your bin is ready to harvest every three months when you feed it regularly. It will be quite full. If it is not full, keep composting. In some cases, you'll only harvest the materials once or twice a year. Follow the following routine to harvest your bin:

Remove the top six to nine inches of material and place them in a container or wheelbarrow. The majority of worms and fresh food scraps are in this layer. You will notice a change in the composition of the materials as you dig down, and will no longer be able to recognize the individual food scraps. Don't dig any deeper. Place this material aside.

Dig out the remaining material until you reach the bottom of the bin. This is the finished compost. It may be wet and need to air and dry a few weeks. You can place it in a container with ample holes for air, making sure not to expose it to rain or other wet conditions. When it is finished, it will be slightly moist and smell earthy.

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## **Use:**

Congratulations! By harvest time (assuming you harvest once every three months), each bin you have will have diverted approximately 300 lbs. of food scraps from the landfill, and you are ready to return this material to your garden.

Vermicompost is a well balanced soil amendment. The vermicompost you have produced is teeming with microbiological life, and some worms, that improve soil aeration, disease resistance, improves fruit and flower set, and provides a nutrient boost for color, appearance, and general plant robustness. It is not a sterile medium, however, as the material contains live vegetable seeds that come with the food scraps you provided. This does no harm, but will explain why tomato, cucumber, and other sprouts appear in your plants from time to time!

The vermicompost you have produced is an excellent plant food for potted ornamental plants, and is useful in the vegetable garden. Ideally, you should feed established plants sparingly by scratching in a 1" layer of compost under the "drip line" or canopy of a plant, place a handful in each hole as you transplant vegetable starts, or scratch in a handful to established vegetable plants. When you use vermicompost in this manner, you will be able to apply it to an area that is five times greater than typical compost.

The long and short of it is that vermicompost is amazing in your garden. Add some and notice how the plant responds in its with color and vitality, heat resistance, and fruit set.

## **Compost Versus Vermicompost**

Typical compost is tilled into an entire field. Vermicompost is added with precision to your plants. The two are symbiotic. Through research by Dr. Elaine Ingham , vermicompost has been shown to have a higher beneficial mico-organism population than standard compost.

Typical compost is beneficial to improve the soil structure and soil microbiology for your whole field, but their is a wide range of quality and age in the "compost" you purchase. Bulk compost is often sold both "hot" and young, meaning that pH and organic materials have not yet fully stabilized. This condition is typically offset by gardeners who till new compost into a field then wait a few weeks before planting.

The vermicompost you are producing is neither hot nor imbalanced. The pH of vermcompost is often neutral, which means that the nutrients it contains become easily available to the plants. Vermicompost infuses a community of beneficial organisms and worms to your planted area, and if there is sufficient compost in the entire bedding area, the population of beneficial microorganisms will remain in the soil bank for a longer duration.