







How to set up a super simple worm bin system:

This is a simple, two-bin system that works off the tendency of red wiggler worms (*Eisenia fetida*) to feed at the top and their natural migration toward food and moisture. The bins nest into each other with drilled holes at the top for aeration and at the bottom for drainage. Worms need oxygen so air holes are drilled into the lid and near the top of the upper bin or “working bin”. Worms also like moisture, but standing water can become anaerobic and smelly, so we drill holes in the bottom bin for drainage.

Like most systems, this system will contain a mix of feedstock (like vegetable and fruit scraps) and a bedding material like shredded cardboard or newspaper. Vegetables and fruits are around 90% water content which is simply too high for a worm bin. Ideal moisture levels are around 60% moisture content so we need to add some carbon content to bring down the water content and to provide some structure for the bedding.

Materials Needed

Item	Details
 Containers	Two opaque (not clear) plastic storage bins (e.g., Rubbermaid totes) with one lid. A good size is 10–18 gallons each. They must be able to nest (one fits inside the other).
 Tools	A drill with a 1/8 to 1/4 inch drill bit.
 Bedding	Shredded newspaper (black and white print only), shredded cardboard (plain, non-glossy), or coconut coir.
 Grit	A handful of sand, topsoil, or crushed eggshells.
 Water	Tap water in a spray bottle or pitcher.
 Worms	About 1/2 to 1 pound of Red Wiggler worms (<i>Eisenia fetida</i>).

Step 1: Prepare the Bins (Drill Holes)

Worms need air (**ventilation**) and a way for excess water to drain (**drainage**).

1. **Top/Working Bin (with holes):** This bin will hold the worms and bedding.
 - **Drainage Holes:** Drill about 20 evenly spaced **1/4 inch** holes across the entire **bottom** of the bin. These allow excess liquid to drain into the collection bin below.

- **Ventilation Holes:** Drill small **1/8 inch** holes around the sides, about 1-2 inches below the top rim, spaced every few inches. This provides airflow.
 - 2. **Bottom/Collection Bin (no holes):** This bin will sit underneath the working bin to catch liquid. **Leave this bin intact—do not drill any holes.**
 - 3. **Lid (with holes):** Drill several **1/8 inch** holes across the lid for more ventilation.
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Step 2: Assemble the System

1. **Elevate the Working Bin:** Place a few bricks, wooden blocks, or rocks in the bottom of the **Collection Bin** (the one without holes).
 2. **Nest the Bins:** Place the **Working Bin** (with all the holes) on top of the bricks/blocks inside the Collection Bin. The bricks ensure a space for the liquid to collect without the working bin sitting in it.
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Step 3: Prepare the Bedding

The bedding is the worms' home, not soil!

1. **Moisten:** Place your shredded newspaper and cardboard into a separate container. Add water until it's damp, but **not soggy**—it should feel like a wrung-out sponge and not drip when squeezed. Suggest using a spray mister bottle and not pouring from water container. You want to get all the surface areas wet but keep some structure.
 2. **Fill the Bin:** Fluff the moist bedding and add it to the **Working Bin** until it is about half to three-quarters full. It should be loose and airy.
 3. **Add Grit:** Sprinkle a handful of sand, soil, or crushed eggshells onto the bedding. Worms need this "grit" in their gizzard to help grind up their food.
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Step 4: Introduce Worms and Feed

1. **Add Worms:** Gently place your Red Wigglers on top of the bedding. They are sensitive to light and will quickly burrow down to find the dark.
2. **First Feeding:** Wait a day or two for the worms to settle in. Then, lift a corner of the bedding and bury a small amount of food scraps (about 1 cup for 1 lb of worms). **Always bury the food and cover it completely** to prevent fruit flies.
3. **Cover:** Place the lid loosely on top. The bin should be kept in a cool, dark place (like a basement, garage, or under a sink).

Quick Maintenance Tips

- **Feeding:** Feed them small amounts (once or twice a week) and only after they have mostly eaten the previous feeding. Avoid meat, dairy, oil, citrus, and spicy foods.
- **Moisture:** Keep the bin as moist as a wrung-out sponge. If it's too dry, mist with water. If it's too wet, add more dry bedding (shredded newspaper).
- **Air:** Gently fluff the bedding every few weeks to keep it aerated.

Harvesting the Castings

Three methods:

1. Directional Feeding,
2. Light Harvesting
3. Screening/Sifting

1. Directional Feeding Method

In a single-layer bin, the easiest way to harvest the finished castings (vermicompost) is the **Directional Feeding Method**. This encourages the worms to move to one side, leaving the finished compost behind.

Start the Process (4-8 Weeks Before Harvest):

1. **Stop feeding the entire bin** and only feed the worms in **one corner** (or one half) of the bin.
2. Always place new food in this same designated area. As the old material is consumed, the worms will naturally migrate to where the new food is being added.
3. The rest of the bin will gradually become finished castings, relatively free of worms.

Harvest Day (When the Bin is mostly dark, earthy-smelling material):

1. **Prepare a Collection Spot:** Lay a tarp or sheet of plastic on the ground.
2. **Remove the Castings:** Starting with the side of the bin where you **have not** been feeding, gently scoop out the finished, dark, fine material (the castings).
3. **Look for Worms:** If you find any worms, simply put them into the side of the bin that you have been feeding (where the main worm population now resides).
4. **Continue:** Continue scooping until you have harvested the majority of the finished castings from the empty side.
5. **Replenish:** Once harvested, fill the empty side of the bin with **fresh, moistened bedding**. You can now begin feeding the worms in this newly bedded area, and the cycle continues.

This method allows you to continuously harvest from one side while the worms are actively working and eating on the other.

2. Light Harvesting Method (The "Pyramid" Method)

This method relies on a worm's natural aversion to light (*photophobia*). When exposed to light, the worms will instinctively burrow down to the dark, moist center of the pile, allowing you to scrape off the worm-free castings from the top.

When to Use

- When the bin contents are mostly dark, fine castings with very little visible food or bedding left.
- You have an outdoor or indoor space with a **bright light source** (a strong lamp or indirect sun).

Instructions

1. **Stop Feeding:** Stop feeding your worms for 1–2 weeks before harvest to ensure most of the material is finished castings.
2. **Prepare the Area:** Lay a plastic tarp, a large sheet of plastic, or a piece of cardboard on a flat surface under a **bright light** (or in indirect sunlight).
3. **Dump the Bin:** Gently dump the entire contents of your worm bin onto the tarp.
4. **Form Piles:** Shape the material into a few cone-shaped piles or one large, low mound.
5. **Wait and Scrape (1st Pass):** Wait for 5–10 minutes. The bright light will stress the worms, causing them to dive down into the center of the piles for darkness.
6. **Scrape:** Gently scrape off the top 1–2 inches of the pile. This top layer should be mostly worm-free castings. Place this harvested material into a separate container.
7. **Wait and Scrape (Repeat):** Wait another 5–10 minutes. The worms will dive deeper. Repeat the scraping process.
8. **Continue:** Continue this process until the piles are very small and you are left with dense, wiggling balls of worms (and maybe some unfinished food/bedding) at the bottom.
9. **Return Worms:** Gather the remaining worm balls and place them immediately back into your cleaned and freshly bedded worm bin.
10. **Use Castings:** The material you scraped into the separate container is your finished vermicompost.

3. The Screening (Sifting) Method

This method separates the finished castings from the larger, unprocessed material (and most of the worms) by size. It gives you the fluffiest, cleanest finished product.

When to Use

- When you want a very fine, uniform product (e.g., for making worm tea or top-dressing houseplants).
- The material is allowed to **dry out slightly** before sifting (damp, but not wet like a sponge).

Instructions

1. **Build or Buy a Sifter:** You need a screen with inch to inch mesh size.
 - **DIY:** Build a simple wooden frame and attach hardware cloth (mesh screen) to the bottom.
 - **Simple Tool:** A kitchen colander with wide holes can work for very small batches.
2. **Separate Material:** Before sifting, it is helpful to first remove the top 4–6 inches of material (where most of the worms and newest food are) and set it aside to start a new bin.
3. **Slightly Dry Out:** If the castings are wet, spread them out on a tarp for a day or two in a cool area to let them dry slightly. Damp (but not soggy) material sifts much easier.
4. **Sift the Material:** Place the screen over a bucket, wheelbarrow, or another container. Scoop the castings onto the screen.
5. **Shake/Agitate:** Gently shake, rock, or rub the material over the screen.
6. **Sort the Results:**
 - **The Castings:** The fine material that falls through the screen is your finished castings.
 - **The Overs:** The material left on top of the screen ("overs") will contain undigested food, large bedding pieces, and most of the adult worms.
7. **Return Overs:** Place the "overs" material back into the main bin along with your reserved top layer material to be processed again.
8. **Start New Bedding:** Add fresh bedding and food to the bin before returning all the worms.