

## What is a Worm Bin used for?

A worm bin is used to recycle organic waste products for an individual household using composting worms to aid the decaying process.

### Benefits of a Worm Bin:

- Worm Bins eliminate odorous wastebaskets
- Worm Bins reduce your garbage amount by 1/3.
- Worm Bins create compost rich in nutrients perfect for any house plant or garden.
- Worms make great pets

### What you need to create a Worm Bin:

- Modified plastic/wooden bin/box/tote
- Bedding Materials
- Composting worms (redworms)
- Container for organic waste collection
- Container for dampening bedding materials
- H2O

### Acceptable Worm food:

Organic materials(no pesticides, diseases, etc)

Vegetables	Fruits
Citrus(small doses)	Cheese(small doses)
Onion	Cake
Cream Cheese	Oatmeal
Eggs	Crushed Egg shells
Molasses	Pancakes
Pizza crusts	Tea leaves
Biscuits	Coffee Grounds
Pasta/Rice (no sauce)	Breads
Grains and Cereal	Beans
Hair clippings	Plant trimmings
Sawdust	Egg cartons
Paper Leaves	

### Un-acceptable Worm food:

Anything with insecticide or chemicals	
Non-biodegradables	
Meat and bones(odorou)	
Dairy products	Oily food
Spicy hot food	Metal and foils
Weeds	Pet/human feces

### Resources:

Worms Eat My Garbage, by Mary Appelhof, 1997

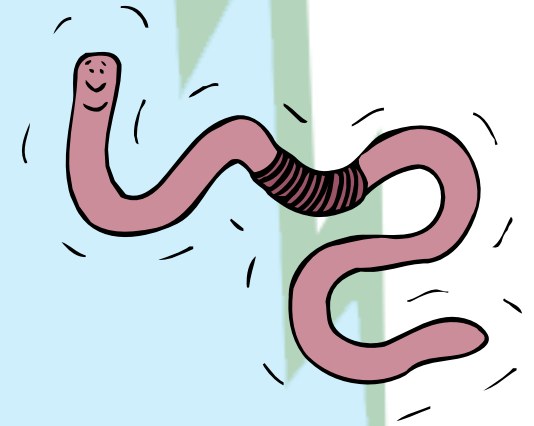


*For more information on harvesting methods or if you have any other composting related questions please contact Joshua Taggart at [taggartj@onid.orst.edu](mailto:taggartj@onid.orst.edu).*



Recycling  
Your  
Organic  
Waste:

# The Worm Bin



*A guide to  
creating  
your own  
worm bin*

## About Composting Worms:

### A Composting Worm Needs:

**Temperature:** 59-77°F for optimal efficiency, but can survive at 50-86°F

**Moisture:** Worms breathe through their skin, which must be moist for the exchange to take place. Too much moisture can drown a worm.

**Ventilation:** Worms need oxygen like we do. An oxygen rich environment will also benefit aerobic bacteria activity, which assists in the decaying process in an odorless manner.

**Acidity:** Slightly acidic conditions benefit a worm. pH5-pH9 are best. An overly acidic environment will kill a worm and cause them to flee.

**Light:** Worms are extremely light sensitive. A dark environment without direct light is ideal.

### Which Worms are Composting Worms?

Common names for Composting Worms include: redworm, red wiggler, manure worm, red hybrid, and tiger worm.

Scientific names for Composting Worms include: *Eisenia fetida*, *Eisenia andrei*, and *Lumbricus rubellus*.

The names that matter are the Scientific names, especially when first purchasing the worms. Make sure your worm dealer knows the scientific name. Nightcrawlers and other earth moving worms will not do.

### What size bin do I need?

That depends on how much organic waste you produce. Collect your waste throughout the week and estimate how many lbs you produce. Worm bins should be 12-18in high with 1 sq ft of surface area per lb of organic waste produced per week

### How many worms do I need?

After calculating how many lbs of organic waste you produce for the week, divide that amount by 7 to get the average amount of waste produced per day. For every lb of waste produced per day you will need 2lbs of worms.

## Assembling your Worm Bin:

When modifying your worm bin, you should keep in mind the *needs of your composting worms*.

- Bins should have drainage holes and something to catch the excess water.
- They should also have air holes on the sides near the bottom and somewhere near the top. The size and location is up to you.

## Bedding Materials

### Shredded paper and cardboard

- Inexpensive
- Available
- Odorless
- Tends to mat into layers
- Requires prep time (shredding)

### Coconut fiber (use as ½ of bedding only)

- Worms' favorite
- Retains moisture well
- Odorless
- Clean
- High transportation cost

- Must be purchased

### Peat Moss

- Common worm shipping material
- Non-renewable
- Acidic

### Putting it all together:

In a separate container place shredded bedding material. Then add correct amount of H<sub>2</sub>O. For each lb of bedding material add 2-3 lb of water. Mix container until bedding is thoroughly moist and not dripping.

Place moistened bedding into modified worm bin, filling about ¾ of the bin.

Add worms to top of bedding. Place bin in well lit area so worms flee into the bedding provided.

Worms usually come in dirt, which adds grit to help the worms digest waste and also introduces helpful bacteria and micro-organisms. If your worms were transported without dirt, add two handfuls to the top of your bedding.

Lock your lid down and place your bin in a well ventilated, easily accessible place, safe from excess moisture and direct sun light.

## Maintaining your Worm Bin:

- Bury your organic waste 1-2 time per week. Start in a corner and work towards the opposite corner as you bury the waste.
- Bury the waste near the top of the bedding and cover with an inch of bedding. Worms feed from the bottom of the waste piles.
- Look for excess water build up on the walls and at the bottom of your bin. You can tip your bin to drain excess water or add some dry bedding to the top of the bedding to absorb excess moisture.
- Foul odors could arise from a specific piece of food deposited, like meat and dairy, or from a lack of oxygen movement throughout the pile. The lack of ventilation supports the anaerobic bacteria activity found in kitchen wastebaskets. Correct this by adding fresh bedding and fluffing the bedding to allow air through. It may be necessary to create additional ventilation holes.



## Harvesting your Compost:

On average you will need to harvest your compost every 4 months. There are different ways to harvest your compost. One way is the "Dump and Sort:"

1. Prepare new bedding and set aside.
2. Roll out a sheet of plastic, create 9-10 piles of worm filled compost.
3. Keep these piles under direct light and give the worms time to work their way deep into the individual piles.
4. Brush off the outer layers of each pile working in order from pile one to pile nine, leaving time for worms to work their way deeper into each pile.
5. Eventually you will be left with a large pile of compost and a large mound of worms.
6. Place new bedding into worm bin, add worms and sprinkle 1-2 handfuls of dirt on top.