

# Earthworms for Living Soil - Mary Ann Smith



## Contact Information

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Come see us at the North Asheville Tailgate Market  
and Haywood's Historic Farmers' Market.

Visit us at [www.valleyviewworms.com](http://www.valleyviewworms.com)  
or on FB at Valley View Worms and Produce

## Favorite Websites:

1. Redworm Composting: [www.redwormcomposting.com](http://www.redwormcomposting.com)  
& FB page
2. Worm Farming Alliance: [www.wormfarmingalliance.com](http://www.wormfarmingalliance.com)  
& FB page
3. NCSU/Vermicomposting/Rhonda Sherman:  
[composting.ces.ncsu.edu/vermicomposting-north-carolina/](http://composting.ces.ncsu.edu/vermicomposting-north-carolina/)
4. Urban Worm Company: [urbanwormcompany.com](http://urbanwormcompany.com) & FB  
page
5. The Little Worm Farm: [thelittlewormfarm.com](http://thelittlewormfarm.com)
6. High Yield Organics: [highyieldorganics.net](http://highyieldorganics.net)

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## Resources:

1. Earthworms Vermicompost: A Powerful Crop Nutrient over the Conventional Compost & Protective Soil Conditioner against the Destructive Chemical Fertilizers for Food Safety and Security, <https://research-repository.griffith.edu.au/>, Authors Sinha, Rajiv, Herat, Sunil, Valani, Dalsukhbhai, Chauhan, Krunalkumar; Published 2009
2. The Worm Farmer's Handbook, Rhonda Sherman, 2018.
3. Norman Arancon, 2018 Vermiculture Conference.
4. Heather Rinaldi, 2018 Vermiculture Conference.

# Making a Composting Worm Bin

## Materials Needed:

- One 18-20 gallon plastic storage box (dark, not see through)
- Drill 1/4" bit for making drainage & ventilation holes
- Newspaper and/or cardboard
- About one pound of composting worms

### Step 1

Drill about twenty evenly spaced 1/4 inch holes in the bottom of the bin. These holes will provide drainage, if needed.

### Step 2

Drill two rows of ventilation holes about 1 - 1 ½ inches apart on each side of the bin near the top edge using the 1/4 inch bit.

### Step 3

Prepare bedding for the worms by shredding newspaper and/or cardboard. Worms need bedding that is moist but not soggy. Moisten the paper product by soaking it in water and then squeezing out the excess water. Cover the bottom of the bin with 6-8 inches of moist bedding, fluffed up. It is good to prepare the bedding the day before adding the worms.

### Step 4

Add your worms to the bedding. A good amount of worms to start with is one pound. There are roughly 1000 worms in one pound.

### Step 5

Cut a piece of cardboard or black plastic to fit over the bedding. Then cover the bedding with the cardboard or black plastic.

### Step 6

Place your bin in a well-ventilated area such as a laundry room, garage, balcony, under the kitchen sink, or outside in the shade. Place the bin on top of blocks or bricks to allow for drainage. You can use the lid of the bin as a tray to catch any moisture that may drain from the bin. You should not have lots of moisture coming from the bottom of your bin.

### Step 7

Feed your worms slowly at first. As the worms multiply, you can begin to add more food. Gently bury the food in a different section of the bin each week, under the cover and bedding. The worms will follow the food scraps around the bin. Burying the food scraps will help to keep fruit flies away. Make sure you do not overfeed your worms! Keeping the bin evenly moist is important. Be careful if the food you are adding has a lot of water content. You can add extra bedding to compensate. Also, if the bedding begins to dry out, you need to lightly sprinkle the bin with water.

What do worms like to eat? Feed your worms a vegetarian and fruit diet. Most things that would normally go down the garbage disposal can go into your worm bin (see the list below). You will notice that some foods will be eaten faster than others. Worms have their preferences just like us. Chopping the food will aid in the decomposition process.

### Feeding your worms:

#### Worms LOVE

Breads & Grains  
Cereal  
Coffee grounds & filter  
Fruits  
Tea bags  
Vegetables

#### Worms HATE

Dairy Products  
Fats  
Meat  
Citrus Fruits  
Oils

### Troubleshooting:

Problem	Probable Cause	Solution
Worms are dying or trying to escape	Too wet Too dry Bedding is used up	Add more bedding Moisten bedding Harvest your bin
Bin stinks!	Not enough air Too much food Too wet	Drill more ventilation holes Do not feed for 1-2 weeks Add more bedding
Fruit Flies	Exposed food	Bury food in bedding

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# What about Earthworms?

Of course, we know that earthworms are very beneficial. They aerate the soil. They make channels in the soil which improve absorption of water and drainage.

## But...

Did you know that earthworms have a much greater impact on the soil?

The waste left behind by worms, called worm castings, has many beneficial effects on the soil and the plants that grow in the soil. The worm castings are good for:

- Supplying organic matter to the soil.
- Helping the soil retain moisture.
- Reducing the density of the soil.
- Helping the soil to retain nutrients longer.
- Supplying beneficial microorganisms to the soil and plants.
- Aiding the growth of microbes in the soil.
- Allowing the plants to utilize nutrients more effectively.

Because of these properties, worm castings make a good soil amendment in flower and vegetable gardens. Here are ways that worm castings may be used:

- As an additive when planting in the garden – Put ½ to 1 cup worm castings in the hole as the plant is set out.
- As an additive when planting potted plants – Make a mix of 10-20% castings with potting soil to use with potted plants.
- As a medium for germinating seeds – Make a mix of 10-20% castings with seed starting mix or line your furrow with castings as you plant in the garden.
- As an amendment in your garden – Apply 1-2” on your garden, then till or dig thoroughly into the soil.
- As a side dressing for annuals and perennials – Mix castings into the soil around your plants at the drip line of the plant and cover with mulch.
- As a tea for plants – Mix castings in a 5-10% ratio with water, steep overnight, and then either water or spray on plants. You may leave the castings loose or put in a tea bag.

For more information and to buy worm castings or compost worms, contact:  
Mary Ann Smith / (828)456-4515 / [dpmasmith@gmail.com](mailto:dpmasmith@gmail.com) / [www.valleyviewworms.com](http://www.valleyviewworms.com)