

VERMICOMPOSTING



35 Gallon Bin

Raising worms is very easy to do. All it requires is something to put them in and something to feed them.

My method for raising worms is very simple. I buy 35 gallon storage tubs from Dollar General, or Wal-Mart, etc... I fill the bins with food/bedding. You can use nearly anything that will compost; grass clippings, leaves, vegetables, kitchen waste (food,

paper towels and such). Fill the bin $\frac{3}{4}$ full with this “bedding”. Contrary to popular belief, it is not necessary to allow for drainage, although you can if you want too. Personally, I don’t. If you don’t over water the bedding, you won’t need drainage. The bedding should be moist, but not wet to the point of dripping.

Next, dump in the worms and put a lid on the bin. The little critters will go to work right away. In a perfect world, a pound of red worms will convert one pound of compost each day. I have never found this to be the case though. It is typically a little less than that.



Food Supply

Now, how many worms will a bin hold? Using the one-pound of food to one-pound of worms ratio is the best bet, but you have to consider how often you want to migrate your little buddies. You also have to remember that worms do not have teeth to chew grass or coffee grounds and such. As bacteria begin to break down those things, the worms feed on them. You won’t find a worm munching on a blade of grass, or chewing on some coffee grounds. The food has to break down some, so it can take some time.

I know some people will argue this point, but consider this: Take a pile of grass clippings, a pile of coffee grounds and a pile of mostly finished compost. Set all three side by side, and turn them a month later. Which pile do you think will harbor the most worms? We have all seen the attraction compost has for worms.



Our friends

In the world of compost, worms are the finishers. They take the material that has been broken down by bacteria and insects, and compost it further. It’s this “fine grade” composting that makes worm castings so valuable. By creating such small particle compost, worms expose a much larger surface area for nutrient release. Not to mention the fact that castings contain about five times as much nitrogen as regular soil, plus lots of other

things. Did you know that worm castings contain even more microbes than the food did when the worm ate it? Also, pathogenic bacteria are killed while passing through the worm. What a nice benefit!

So, how many worms will a bin hold? It depends on what you are feeding them. I use half finished compost. My ratio is one-pound of worms per five pounds of food (roughly). If twenty-five gallons of food weighs one hundred pounds (an estimate), I can add twenty pounds of worms, (or twenty thousand worms). With this ratio, I will be migrating the worms about once every week. Remember that earlier I said that I have never had worms eat their own weight each day? This is how I know.



Half finished compost bedding

Let's go back to the food/bedding mentioned in the second paragraph of this article. Grass clippings, vegetables, kitchen waste...etc, etc... are suitable for your worm bin. The problem is time. We all want to produce as much finished product as quickly as possible. While worms will "eat my garbage", it is a very slow process. By pre-composting the food for them, they are able to convert it into castings much faster. This method also lets you control how wet or dry the bedding is, hence no drainage needed.

We have our bins. We have filled them with food and lots of hungry worms. Now what? We wait. If we know how many worms we put in the bin, and how much food, we have an idea of how long we must wait. Your bin will require very little care at this point. Keep it covered and in a cool place. Check it now and then and lightly mist the top if it dries out. **DO NOT OVERWATER.** Worms are terrible swimmers.



Block of finished castings

If all goes as planned, we will open our bins one day and find lots of fresh worm castings. The only problem is we also have a bunch of hungry worms mixed up in our compost. How do we separate them? Migration. Migrating worms can be as simple or as complicated as you want to make it. If space is no problem, I find the dump and scrape method to be very fast. It entails dumping the finished bin onto a sheet of plywood. The worms will move away

from the light. After about an hour, gently scrape the castings off the top until you see worms again. Repeat this process until you are down to the last few inches of castings. Be careful to keep the castings moist if you are migrating in the sun. I try to do it in the shade so the worms don't over heat. In the meantime, prepare a new bin, or wash and re-fill the one you just dumped, with fresh food. Once you are down to the last few inches of finished castings and worms, carefully scoop them up and place them in the new bin.

There is no need to mix them in. They will move into the new food supply in a day or two, then you can retrieve the last of the finished compost from the top of the bin.

If space is a problem, or in the wintertime, you can migrate your worms another way. You will need a second bin for this method. Take a freshly prepared bin and dump the finished bin on top of the fresh bedding. The worms will migrate into the new food supply. You can hurry them along by leaving the bin uncovered, placing a light over it and scraping.

As you have probably figured out by now, it takes a lot of worms to make a lot of castings. Fortunately, worms breed very fast. The average colony, in a perfect world, will double every month. Great! One thousand, becomes two thousand, becomes four thousand and so on and so on. So at the end of twelve month you have over **FOUR MILLION** worms. Well, not really. Like I said, in a perfect world. Unfortunately, many young worms as well as cocoons are lost every time you harvest the compost.

Not to fear though. One pound of red worms (equal to about one thousand worms) can easily become fifty thousand or more in the course of one year. It all comes down to available food supply. Once the worm population reaches a certain point in a given space with a given food supply, breeding will stop. Dividing the worms into multiple bins as the population grows will ensure a good breeding colony. So how many worms you



Cocoon

have really depends on how much space you have and how much work you want to do at migration time.

Some people recommend picking out the cocoons when you harvest the castings. If you have ever sorted through fifty pounds of castings looking for cocoons you will see why I don't recommend this practice. In case you are wondering, worm cocoons are usually light tan to dark brown in color and kind of lemon shaped. They almost resemble a little seed. I won't go into detail about how worms breed. You can Google that if your interested...and it is interesting, just not important for this article.

I hope this has been helpful to those who are interested in vermicomposting. It's really not difficult, and is a huge benefit to the garden. I personally use castings in my compost tea. Compost tea? That's a whole 'nother article, for a whole 'nother time.

Have fun, grow 'em big,

Monty Wallace