Vermicompost 101

Transcript – Module 4

So, wow, we've really gone over a lot in this presentation. So, let's review some of the basics of this course. So first, you need to start with a bin; figure out how you're going to use the compost and what system would work best for you, and keep in mind that the bin just needs to have good airflow allowing heat to leave the system naturally, and it should be able to keep invaders out. When we had our commercial bins in Phoenix, we had what was called a worm wigwam. It was a three by three [indiscernible] continuous flow system. The plastic lid that came with it kept in too much heat. So, I made a window screen lid for it, and it helped. And the worms were outside in a cardboard producing; their production did slow down a little bit in the summertime, so I slowed down on the feedings so as not to put too much heat into the system, but they were able to thrive throughout the summertime. And also, ants might be an issue, so what we did, we put the legs inside of cups, and we put those cups in larger cups, and made like a water reservoir like a moat. And that way ants and roaches couldn't come into the system, and it seemed more necessary on the outdoor bins. On the indoor bins, I don't have those same kind of problems, but ants don't usually attack the worms. It's just a matter of getting bit by ants while working in the worm bin. So that's what we did for our large outdoor bin.

Once you have a bin or a bucket under your sink, whichever you choose, it will all work the same. You want to put some carbon in there and the carbon is the bedding. It's the brown material, non-heating, most likely going to be like fully composted; you could use your finished compost from your outdoor bins, you could use coconut core, shorted leaves, decomposed or pre-composted woodchips also make great bedding material. Some folks do use peat moss; you can make your own choice about what you would like for the carbon material, and it's really just a good idea to use what you have. If you are thinking about doing this for a business, the coconut core is very popular. It seems to have less flies than the peat moss does, and maybe just because it has a more neutral pH. So that's the carbon.

The nitrogen, the greens, that's going to be the food source, and this is going to heat up momentarily. How many moments? I'm not sure. It depends on how much you put in there and you can put your hand over that area, and you can feel the warmth. If you can feel that being warm, you might want to spread it out a little bit to dissipate the heat and re-cover it up with some carbon to help it break down. And you're always going to want to rotate your feedings, whether or not you feed on like the left side the right side; just kind of envision your bin. Unless you're doing a worm tower then it's not necessary but visualize your bin into sections. Feed smaller amounts more often to optimize the vermicomposting and then add grit at every other feeding. Worms have a gizzard like chickens and alligators, so they need that course material to help break down their food. That can be in the form of crushed eggshells. We do give our eggshells back to the chickens. Well, we save some for the worms. We also save some to put in compost tea. So, the spent eggshells from the compost tea, they've been softened up a bit, will go into the worm bin. I've also dried the eggshells and made a powder in the coffee grinder. It's a little dusty when you do that, or you can just crunch up the eggshells and put them in there. Some people put in oyster shells much like they do for their chicken's grit. A little bit of sand, a handful of healthy garden soil will also work, but it's important that you add the grit occasionally whether it's at every other feeding, once a month, you just want to make sure that you're continually adding some form of grit for the worms.

So, some solutions. We talked about the pillbugs and how they can come out. So, what you're looking for in a worm bed is you want happy, healthy worm bin that smells of the forest. When I had a worm room during the wintertime, that room smelled like a forest. Absolutely amazing. If the bins ever got too wet, I'd put a piece of newspaper, just a whole sheet of newspaper on top, and that would help absorb any excess moisture in the bin, and again, that only seems to be a problem in plastic bins of the wintertime. Sour or fermentation can lead to anaerobic conditions, and those are

conditions that lack oxygen, and that are not favorable to worms. Like I mentioned earlier with the chamomile tea, not a good idea that I covered up the entire bin. I didn't even listen to my own advice, but that's how we learn; we learn by doing.

So, if your worm bin smells sour or there's a fermentation smell, it's likely the cause of putting too much food in there that the worms can't eat at one time, and that hot decomposing matter makes that sour fermentation smell because the microbes and the worms can't keep up with the amount of food being added. So, reduce the amount that you're feeding, perhaps even remove some of the feed in there if it's particularly smelly, and it should balance itself no problem. So, remove the feedstock and the lid and allow the bin to breathe. Consider adding more holes for oxygen as well. Heat does tend to rise in a worm bin, so having good airflow through the system is important, and learn the creatures of the worm bin. Pests can be a sign of imbalance. As we mentioned, the legs on the worm bin to deter ants. Ants tend to like dry conditions. So perhaps the worm bin is too dry, and then if it's too wet, you might be attracting fruit flies and other things, and that could be an excess of food. So, a lot of times the solution or the problem is the answer to the solution. Remove the imbalance to rebalance the system.