Vermicompost 101

Transcript – Module 3

So, what makes worm compost so different than other forms of compost like the thermophilic compost, like your hot outdoor bins? Well, vermicompost is naturally slow release. As the worms make the poop or poop the poop, they get coated in a calcium membrane and that is what makes the vermicompost naturally slow release. You're not going to be in danger of burning your plants by mixing in too much vermicompost. That being said, you don't need a whole lot to realize the benefits of vermicompost. It has plant-available nutrients such as nitrogen, calcium, phosphorus, potassium, and depending on what else you're feeding them, you're going to have a wider range of minerals, micro, and macronutrients, that are bioavailable for your plants. It is absolutely amazing the things that vermicompost can do.

When we lived in Phoenix, the rose society would often buy us out of vermicompost. Every January when they'd prune them back, they would top-dress their soil around the roses with vermicompost, and they saw a reduction in aphids in the spring. And worms help plants produce hormones that allow them to fend off invaders. So again, there's so much to vermicompost besides the bioavailable nutrients. As we mentioned before, you can see reduced aphid populations, you will see increased plant vigor with the available calcium in there. There will be silica in there, and it also protects germinating seedlings from zoospores. There's a wonderful video put out by Cornell University that shows that just a small amount of vermicompost mixed in with cucumber seedlings actually help the plant emit hormones that made it impossible for the zoospores to attach to the young germinating seedlings.

There are so many benefits and vermicompost is more of a soil conditioner than it is a fertilizer. It's putting the life back into your soil, back into your potted plants, back into your seed starts. So much of the soil when we have to buy it, it's in a bag, it's been out in the sun, it may not be the highest of quality by the time we get to using it, and then if you use half a bag, and it sits around. By putting vermicompost in the soil, whether you're making your own blends or just using it right in the garden, you will be putting the life back into your soil; all those microbial populations, all the beneficial nutrients that will be available, and the beneficial critters like the springtails, and they're not the plant-eaters. They eat the decomposing matter, so there's so many benefits to utilizing vermicompost and to making your own.

So, what's in my bed? We talked about the benefits of vermicompost and now, if you're harvesting it and you're looking in there, you might start to see some things that you maybe haven't seen before. The little oval thing next to the [indiscernible] isn't a worm cocoon; that has eggs in it. I've heard the number of eggs in a worm cocoon anywhere from five to 20. If I had to guess, I'd say it's probably closer to two or three. It might be filled with eggs in there, but I've never seen the population grow substantially because there were a few cocoons in the worm bin. So that is what that is, and that's why you're going to wait three months for your first harvest to allow the eggs in the cocoon to hatch and the worms to migrate out of there. If you see them flattened and squished, that means the worms have hatched out of the cocoon. The other picture with the little itty, bitty, squiggly things, those are white pot worms. They are also a decomposer. They will not eat your live plants. They are also not baby red wigglers. Red wigglers, as their name implies, will always be slightly red. I noticed pot worms seem to be more in the spring in the fall as the weather is slightly cooler outside or cooler inside as well. I don't really see a lot of these throughout the winter and throughout the summer. They're just a seasonal thing that's in the worm bin. Where do they come from? Where do they go? I have no idea. I just know that they're not a hindrance to the compost bin, and you will find as you get into this, that it's not just the worms at work here. It's the whole symbiotic relationship of the compost bin.

Some more of what's that? Next to the quarter is going to be a juvenile, well, maybe a toddler red wiggler, but see how it has a slightly reddish tint to it? Red wigglers will always have that slightly reddish tint to them. As they are smaller,

they seem to be more transparent, and as they grow their color develops. The middle photo is black soldier fly larvae. While they aren't bad in a worm bin, they have a more ferocious appetite than the worms. So, at our commercial bins, I remove the black soldier flies and put them in our outdoor bins where you don't have to catch the adults lying around your house. They're really good to compost bins. Some people raise these to feed their chickens. Hot weather composting, you'll notice them in there. They really don't seem to mind the heat at all. I think there's a huge potential for raising black soldier flies for composters and a lot of folks do. And they're not a hindrance, again, it's just that they have a much more ferocious appetite than the worms and the worms tend to be kind of shy. And if you have a cluster of black soldier flies in your worm bin, you're not likely to see worms nearby them, and since we're in the worm raising business, I remove them from the bin and put them in the outdoor bins.

The last picture is a bunch of sal bugs or roly-poly pillbugs. All fairly similar; they are also decomposers, eating wood chips and decaying plant matter. Unfortunately, as many of you gardeners and farmers know, they can be detrimental in the garden itself. They will cut off seedlings, they will eat leaves, they have a very big appetite, so what we do with these if we have an influx of these in our worm bin, what I'll do is I'll put a melon rind in there, and the pillbugs move a lot faster than the red wigglers. So, all the pillbugs were migrate to the melon rind rather quickly, and then I'll shake them off in a bucket, and I'll keep using the same melon rind until I'm pretty satisfied with the population level of the pill bugs, and then the pill bugs, I'll just throw them out to the chickens. So, we get to utilize their resource in the worm bin for a small amount of time, but before harvesting and to keep them out of the garden or to keep their populations in check, I will do a little pill bug track with the melon. And you can keep rinsing off the melon and reusing it until you're satisfied with the level of pillbugs in your worm bin.