

My Major goals throughout all of these past years, have been to:

- 1. Educate the general public on the advantages of vermicomposting versus chemical fertilizers. The things that are being put into our soil and water tables will be around for decades to haunt us and all of our children's children to come. Our landfills speak loudly of our overindulgence in a throw away society. We have to take responsibility for the messes we helped to create and clean them up..
- Start a business where I could become self-supporting in a style that I might become accustomed too. Still working on this ONE!
- Design a Separating Unit that was fast, easy and efficient to use. [AVSA](#) is the beginning of a long line of bigger and better units that will help me accomplish my first two goals.

I've thought long and hard on the best means of presenting my point of view without turning this into a slippery one-way street, headed down hill fast. Therefore, I've invited other vermicomposters, worm growers and just about anyone with an opinion on anything, to join in and teach us all.

Since "Variety is the Spice of life" we should have lots to choose from...

I am going to present Basic information and have additional links for those of you that want more detailed information. "Scientific names, etc."

- My entire priority system has changed during the past few years, now I am a Firm Believer in the "Keep it simple stupid" method. I didn't always do this!
- Who's in charge of this train?

I'm a 51 year old single mom and grandmother. I live in a beautiful No. Calif., area of Shasta County. I've lived here presently for over six years and hopefully will continue to remain here. UPDATE: things change I'm now a 55 year old married grandmother that lives in a beautiful part of upper east Texas.

I have a thirteen year old daughter (going on 25) named Christina UPDATE (Now 17), a dog that answers to Taffy, four cats, a goat named Mandy, lots of chickens, six white doves, a large aquarium, lots of houseplants and of course Red Wiggler Earthworms...

I have been involved in vermicomposting for over 40 years, but I still learn more that I want to share. Check back often for new information.

If you find the lessons informative and a way to recycle green waste into green cash, then feel free to share them with others that you might know that would likewise like to learn

Lesson 1

Welcome to Your Vermicomposting On-line School House.

This first Lesson will mainly consist of :

- A short introduction
- 1. Getting to know earthworms, some of the different kinds, their uses and why some are used for one thing and their cousins are used for something entirely different.
- 2. The red worms that we will be dealing with, their characteristics, preferences and abilities.
- 3. How to set up and start using our Mini-Vermy Worm Farms (Kits). We will discuss bedding, feeding and watering and what to look for during the first week or so.
- 4. How to set up your first vermicompost kit.
- 5. How to make and use bedding for your worm kit
- 6. How much to water and when to add to your earthworms.
- 7. How and when to feed to feed your worms
- 8. Signs of trouble in your earthworm bin, bed or kit.
- 9. Worms What are they?

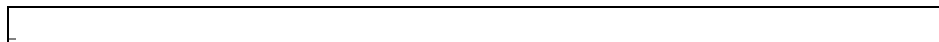
Introduction:

If you will quietly take your seats, we will begin our first lessons adventure into vermicomposting, please keep chewing your bubble gum, I like hearing it pop!

Through out these lessons there will be "letters" that are highlighted, these are links to related topics, some will be pages on my web site, some will lead to other sites. All of the letters will be listed at the end of each lesson, in the same order given. You may wait until you are through with the entire lesson to visit them or you may choose to visit them as they appear (they will open in a new window), the decision is entirely yours, do what is best for you.. Or don't visit them at all.

My name is Judy, I've been involved in Vermicomposting ever since I first discovered it, in 1974, in So. Calif. [\(A\)](#).

It still astounds me when I mention the fact that I raise earthworms, to a new acquaintance, their very first question is " Do you sell them for fish bait?" I have never sold worms for fish bait nor ever even considered it, but since earthworms have always been so closely associated with the fishing industry, I guess that it would seem quite logical from their point of view. Therefore, I feel that its time that we all start working together to point out all the other benefits of earthworm growing, besides the nice fresh trout for dinner..



I do NOT by any stretch of the imagination claim to be an "Expert" on anything, nor do I claim to be a teacher. I am simply a person who cares about the environment and vermicomposting enough to want to share what I have learned, both good and bad with those that are interested in hearing it. So, don't e-mail me and say " Joe Whosit said, does or thinks, this or that". These opinions that I express here are mine and based upon my experiences only. There are a lot of different views that are far better or different from mine, out there...Use your judgment as to what works BEST for you...I'm just setting the table you pick what you want to eat

Some of you have sent me a short bio. on yourselves, thank you its nice to meet you, the others that haven't, it's likewise nice to meet you. Feel free to [Blog](#) at

Lesson 1 continue

Site MAP WITH UPDATED LINKS and Description of each page, BOOK MARK FOR FAST RETURN.

1. Getting to know earthworms

There are lots of different kinds of earthworms, there are the "REAL" earthworms, these are the gray guys that you might dig up in your yard or garden, they grow about anywhere and help aerate your soil. They tunnel through the soil and leave little mounds of digested dirt on top of the ground.. these guys DON'T do well in the compost pile, they may visit the edges, but they are NOT compost worms..

Then there are the "night crawlers" which are usually seen at night, especially when it's damp. Fishermen love these reddish, large worms. They are real picky to raise commercially, they don't adapt well to temperature changes and will run away any chance they get, they usually have to be grown in air conditioned, heated buildings that have lights overhead to keep them in their beds, they will stampede in a thunderstorm... If you want to be a worm roper this is the way to go....

Then we have Our guys the Red Wigglers, there are several different kinds of Red worms, but they all have the basic preference for decomposing organic matter as their food staple and can live in varied temperature ranges, they are tough little guys, or at least mine are... I'm sure that it all depends on what kind you have.. they each have their own characteristics. [\(W\)](#)

So, keep that in mind when you decide what your main Vermicomposting goal is.

Setting up your first vermicomposting kit.

- If you haven't already setup your kit, now is when we are going to do it. If you have already set it up, then review the procedures and see how close you came to doing it "my way".
- Even if you live in an apartment, you can still do this, so space is not a valid excuse. These "Kits" are real handy and take up a very small amount of space. I keep mine next to my sink, sounds disgusting doesn't it? Well it isn't, the worms stay where they belong, in it! They are very obedient if you don't mistreat them. It's real handy for me right there, plus I don't have garbage sitting around waiting for me to get time to haul it to a kit, that is hidden in some dark corner

somewhere, out of sight and out of mind.

Since I use the "Cabinet style" Kit, I still have the counter space all around it to use for other things. The drawer is simple to open and put leftovers into. Since it's right by the sink, I don't get lazy and just toss the coffee grounds into the trash, which makes my trash smell a whole lot better now, in fact it doesn't have any smell at all. The only thing in it, is tin cans, plastic bottles and a little plastic wrap.. I recycle the plastic bottles and tin cans when I get them outside. I have a very small amount of trash that goes to the dump...The earthworms remove the smell quickly from the garbage that I put into the kit. (we'll discuss this later)

- There are several different types of containers that can be used for vermicomposting kits and it all depends on your needs, desires and income. You can use almost anything that is inert, doesn't put off its own toxic ingredients.



Some suggestions for earthworm kits are:

- Old Styrofoam ice chests, old wash tubs, cheap storage containers from the dime store, etc., these are just the units we are going to be "starting" with. They need to be small enough to see fast results and still be controllable.
- After you get a working knowledge of what's going on, then get your bigger, better units. By then you will have a better idea of which size, what kind, etc., that will best fit your lifestyle and needs.

Now that you have your Kit in hand, lets poke some drainage holes in it, I burn holes in the plastic ones with a hot steak knife, (don't breathe the fumes), or you can drill them with a drill, it all depends on what kind of material your kit is made from... Poke small holes about every 3-4 inches all over the bottom, (holes should be about the diameter of a large nail) if your kit has a tight fitting lid (I don't like these) then poke holes in the sides and top...

If your kit is the cabinet type, this is not necessary as the air circulates quite easily around the drawer and from under the top, just poke the holes in the bottom of the drawer.

We will be checking to see if you have enough holes as we go along...good drainage is essential and must be based upon your watering habits, there should never be any standing water in the unit. After you water it, the excess should drain out freely in a matter of a few minutes...

Bedding for your earthworm bin or kit.

There are many suggestions on bedding, when I first started I was told that I "HAD" to use peat moss and only a certain kind, to successfully start a worm bed, I bought the

stuff for years before I found out I didn't have to have peat moss at all...More expert advice! I was told that I had to have manure mixed in with it, WRONG. I was told that I had to add dirt for the earthworms gizzards, wrong again, NOW Red Wigglers don't even have gizzards.. in other words the experts drove me nuts! So what is my "expert" advise?

I start mine with ripped up newspaper, this is the only time in their lives that I spoil them... I rip it lengthwise into about 2 inch strips, not by individual sheets but by the whole section. Each section I grab by the fold and rip downwards. A whole bunch of 2 inch strips at once. I don't separate them, I just toss them all into a bucket, fill it with water, soak them until they become soaked all the way through. About an hour. Dump the water out and finish draining in my kit...The soaked paper should cover about 3-4 inches of the bottom of your kit.



I toss in a couple of handfuls of dirt, compost or potting soil (from a plant that didn't make it), not for their Gizzards, but just as a safe place for them to get out of the bedding if need be. During the first few weeks, when it starts breaking down, it generates heat and can sour, this dirt acts as a buffer and "safe zone". I put this at one end, the end I won't be feeding on... I just feed on one end...

When the water stops draining out of the bottom of the kit, add the earthworms, I just dump them into one pile and gently spread them out a little over that area, with the bedding that they came in... pour another cup of water over the top, it seems to settle everything down a little, let drain well and then put the drawer into the cabinet, or put your lid on or a loose cover, they like it dark and cool so move them to their new home area with this in mind.



Here again "No excuse", if you have fishing anywhere in your area, then you will undoubtedly have Red worms at the bait dealers, hardware store, or somewhere, if you have to buy them this way, it is more expensive, but it is still a start. You can start them in a coffee can, if you have too... so Lets get them and get started.....for those that haven't yet!

■ Feeding MY babies:

The worms will be eating very little, for the next week or so. Their food has to start decomposing in order for them to eat it. So, what you add today will be what they will eat in a few days or even a week from now....Right now they will not need anything to eat, but you can add one piece of bread and some coffee grounds or tea bags if you have them... DON'T dump all those leftovers on them yet...You will just make the bedding sour and the worms sick...During the next few weeks the bedding will start breaking down, and the worms will be eating it, they will need very little between now and then. Just watch the bread, it will get moldy, but don't panic, its okay... its just doing what its suppose too. Don't worry they will soon be eating all your leftovers, rubbing their tummies and looking at you with big, begging eyes, asking for more! When the bread starts disappearing add another slice.

■ Watering your vermicompost kit or bin

Here again the experts disagree, I prefer keeping my vermicompost kit on the wet side, wetter than most. 70% moisture content seems to be acceptable. When the bedding is squeezed tightly only a few drops should appear. I've found that very little watering is necessary when scraps are added on a regular basis, the scraps supply the moisture.

I've heard it said that if you see a slime trail than the earthworms are okay. I've never seen a slime trail from my redworms, and doubt if I ever will. My thinking on this could be wrong, but if the worms need to generate their own moisture in order to crawl around, then they are burning up energy that they could better be using eating garbage.... so, I keep my bedding wetter and they eat a lot better. I don't keep them soaking wet, just nice and damp, they are shiny and slick and they move through the bedding real fast, I can hardly catch them... But, I would imagine that one disadvantage to keeping them this wet, would be the potential for faster break down of the food, which could lead to sour bedding faster. I add brown paper bags and cardboard that seems to counteract this.. Plus I keep what I call a "safe zone" at one end of the bed, I don't add feed or water to this area, it never dries out, but it does give them a safe place to get out of the active part of the bedding in case it gets sour, too hot or too wet. Once the bed is established for a while most problems solve themselves.

The worms prefer a dark, cool place, so even though you want to watch their every movement, let them get settled a little, then just take them from their nice dark, cool place and look at them, then put them back... A place that you can easily view them, isn't necessarily good for them... If you have the cabinet style, you can leave them out, its dark inside the unit, just don't put them in direct sunlight, or place them where it gets too hot or cold.

- That concludes our first lesson. See you back here same place and time for your next lesson... [click here](#) to return to main lesson page
- If you have any questions or comments you may post them on the [blog](#)
- IF YOUR KIT develops a unpleasant odor, sour, etc., e-mail, contact me immediately.

Hopefully you have done lesson one and have started your earthworm "kit" this lesson will deal with taking care of it.

Lesson 2

Lesson two will deal with the

- General characteristics of the "Red Wiggler Earthworm"
- What a healthy red worm acts and looks like.

■ What red wiggler earthworm egg capsules look like.

■ The breeding habits of earthworms.

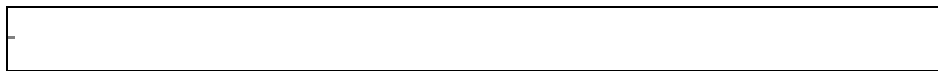
■ What to look for as your worms grow.

General characteristics of the "Red Wiggler Earthworm"

What a healthy red worm acts and looks like:

A healthy red worm is a "med-dark brownish red," with a iridescent looking sheen. It will be quite active and even hard to catch, they will move quickly and generate a very faint "slime trail" when you place them on a dry surface, such as your hand. When you hold them they will be cooler than your hand and try to escape they will NOT necessarily be fat!

While working for a "bait dealer" years ago, I noticed that the "fat worms" were more fragile than the thinner earthworms... Less healthy and had a tendency to "Break apart" far easier. I guess it would all depend on what you plan to do with the earthworms, fishermen prefer the fatter, bigger worms. While for vermicomposting I think that a bunch of "hungry smaller worms" would do better.



What red wiggler earthworm egg capsules look like:

The worms egg capsule will resemble a grain of "light yellow" rice when they are first deposited and will be at the same level as the worms are feeding at (upper 4") if the conditions are right. The capsule will gradually turn to dark brown as it reaches the "baby hatching" time.

Each egg capsule can contain between 6-10 baby earthworms and can hatch in between 2 - 4 weeks , depending on the conditions of the bed, bin.

The worm egg capsules can lay dormant for years if the conditions aren't right... even when the bedding is completely dried out... I've done it, unintentionally, but they hatched after about two weeks when I started watering the beds again....see [what NOT to do to earthworms](#).

The babies will resemble the adults, only a lot smaller. The capsule will resemble a brownish transparent shell, with the top open after hatching.



Different breeds will have slightly different colors and sizes, but will basically do the same.

Ah, what you always wanted to know, but were afraid to ask....

The breeding habits of the Red Wiggler earthworm.

After the worms reaches about 3 months old, there will be a "breeding band" (there is a nice scientific name for this, you can look it up) it will develop about one-fourth way down from the head. It will be a lighter color and quite evident. As the worm matures this band will become thicker and wider...

The earthworms have both the female and male sex organs, when they breed they can each grow and deposit an egg capsule... thus is why they can and do multiply so quickly... each breeding can result in 12-20 babies, hatching every two - four weeks...With these babies reaching breeding age at about 3 months... Population explosion....they are said to double every 90 days. Which is fine if you have one bin and want two... but when you have a hundred and are looking at finding a hundred new bins within 90 days, and then four hundred 3 months later. Well anyway, you do the math.....

Breeding stock

Everyone that starts into the business wants "breeding Stock" my thoughts on this are:

■ The larger breeder earthworms are harder to get adapted to the new bedding, growing conditions and will have a higher mortality rate, besides costing more in the first place.. and actually in the long run will probably produce less.

■ Bed run earthworms are: "as they are found in the bed," which will be different ages and sizes... these seem to do better at surviving the new conditions and will reach "Breeding age" quite quickly...and do their best to repopulate their new environment.

I haven't read anything on this, but my experience has shown that when the earthworms are stressed they seem to produce more egg capsules and go into the "survival of the species mode".

Things to do:

For those of you that have your worm kits up and running for a week or two.

■ I'd like for you to Post on the [blog](#) what your earthworms and kits look, smell and feel like...

that's right put your hand directly over the bedding and hold it there, is the bedding cool, warm, etc...

■ What does it smell like, and don't say coffee (if it does you have been drinking too much!), we need to start adding food to the kits, they should have some of their bedding gone now, just start putting in a little kitchen scraps... "no meat or milk products." I don't recommend chopping these up yet, just let them decompose naturally.

■ Toss in a brown paper bag that is torn up, you can wet this and put it over the top and a few egg shells if you have them, lightly crunched. If you have any problems let me know or post them on the [blog](#).

Quiz for lesson 2.

1. Is the bedding getting eaten yet, is it turning dark?
2. What do the worms look like, healthy or other.
3. How do you like worm growing so far?

Post on Blog or email me the answers if you want to: [Judy](#)

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Pests, Bugs and things that are creepy, crawly and scary in earthworm bins, beds....OOOOH

Thanks so much to Babe and Linda for the work they did on finding the common names and scientific names for our "critters" , pests we will be discussing in this lesson. Couldn't have done it without you. Thanks again.. YOU both get A+ Plus. And for the other Volunteers, there is going to be a little surprise for you too.. I appreciate the help..

UPDATE:

There is a Pest that goes beyond the word pest that Babe and Linda didn't come up with, that has raised its ugly head of late... imported Red Fire ants... they can quickly kill an entire earthworm bed. Keeping the bed wet seems to be about the only way to keep them out!! I lost some of my earthworms to fire ants after our move to NE Texas. They move in quickly, so beware.

Now to work.

There are a lot of different types of organisms, insects, critters, pests and good guys that hang out in worm bins or close to them, some are beneficial and some aren't so good.

When I first started out, most growers didn't want ANY bugs except earthworms in their beds, we considered them all bad and went to great lengths to get rid of them. Since there weren't too many experts back then or people that had been growers long enough to have any long range experience of the effects of these "Clean of bug" beds, I'm sure we did more harm than good.

Now a whole host of once "bad guys " are being shown to actually help the earthworms in their quest to clean up the environment. These bugs help by "pre-digesting" and breaking up the chunks of decomposing matter, so that it becomes easier and faster for the earthworms to consume. Which improves the system as a whole, with the "garbage" having less time to lay around and produce odor or draw flies..



So, before going on a "find and eradicate crusade" through your bins, lets take a few minutes and look at each of the "pests" and what it does and doesn't do...

THE BIG THE BAD AND THE UGLY, by Babe (Wormman)

Predators play an important part in the ecosystem. Keeping a balance so no one species population overwhelms the other. There are many predators of earthworms in the lawns and gardens. Also these same predators can be a problem in certain bin configurations if precautions are not taken.

The BIG

Moles; eat 15-20 earthworms each day and leave runs for the shrew who also eats worms for dinner. Other mammals who eat worms are. Hedgehog, Badger and Red Fox .

If these can get to your bins say "good by wormeys".

THE BAD

There are many birds who can prey on a open bin or windrow. Among these are Starling, Crow, Robin to name a few.

The amphibians also make earthworms their prey. Toads and Frogs, Salamanders, Lizards and some Snakes.

THE UGLY

Besides the Mammals many invertebrates prey on the earthworm.

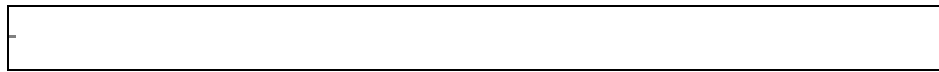
Centipedes use poison fangs to catch their prey.

Flatworm feeds by attaching a feeding tube and liquefying the worm.

Mites (there are many kinds), The Red Mite invade the earthworm to grow and feed by attaching itself and sucking out the body fluids.

Slugs, there are 3 species who prey on worms. Beetles, some species.
Leeches.

Ants invade the bins in most areas, but are harmful only to the extent they eat the sugar and carbohydrates in the feed and bedding. **"NOTE:SEE FIREANTS ABOVE"** Some Ants will kill young earthworms or carry off and suck the fluids from the capsules. And of coarse Fish.



Many of these creatures are very important to our ecosystem. In the worm bin most are not a problem if precautions are taken. Predators may become a problem in the bin when other factors, temperature, pH, feed stock and etc. are not right for the earthworm.

Lesson 3 continue

There are many other creatures in the worm bin, few are harmful to the earthworm. Most are beneficial, and take their place in the food chain.

Some are problems for the bin. Mice and Rats will nest in dark corners. The worm bin/virmi-compost pile is a natural habitat for a great many insects and pests. All insects generally thrive on the moist environment and decaying organic matter.

Spiders, Earwigs, Millipedes, Grasshoppers, Crickets, Flies, Silverfish, Termites, Aphids, Sow bugs, Stink bugs and many more will invade the worm bin at one time or other. You may see them in every stage from eggs to adults. These insects are not harmful, except they may eat some of the earthworm feed. By burying the feed you can help keep the maggots and fly larvae under control. A layer of moist shredded paper or cardboard will suffice as a cover. "I use a wet paper feed bag (whole) over the feed with a heavy board on top, seems to work for me."

If you use rabbit manure you may see a white insect develop in the earthworm bin. This is a Louse which grows on the rabbit and falls off into the manure. It is not harmful to living earthworms it thrives on dead and dying organic matter.

Nematodes; A white thread like worm approx. 1/4 to 1/2 inch long may grow in beds which are high in acid content. (generally caused by over feeding). They are not

harmful to the earthworm and are sometimes raised for tropical fish food.

The last predator of the earthworm to mention of course, is man. By using the chemical fertilizers, insecticides, bleaches, herbicides, on the farmland and home sites. Filling our garbage cans for the land fills with organic material, people can destroy the natural habitat of the earthworm in general. For us wormy growers neglecting our bins. Not using the proper material, over or not feeding properly, allowing moisture to vary, or not protecting the bin from predators, we become the worms worst enemy. The only diseases known are caused by these conditions. With proper planning, installation, feeding, watering and general care on our part, we can eliminate many of the health problems with earthworms. Have a good, healthy and prosperous time in the bin.
wormman

Thanks Babe, lots of good information for us to digest..

Most of the problems that Babe mentioned above are from outside beds/bins where these predators are anxiously awaiting each and every opportunity to invade and eat their fill of earthworms. This was one of the main reasons that I designed AVSA to be used indoors. The creepy, crawling insects are stopped at the floor level with either cans of water w/mineral oil that the legs sit in, or by wrapping some cheap fly strips around them. Flying insects are controlled by tacking some strips above the units, (out of your way, they are STICKY, ask my white dove!)

Speaking of flying thingys, is your Kits starting to Hum with fruit flies, gnats yet? If so, remove the drawer and Tape (use about any kind) a fly strip on the underside top of the cabinet, it will be on the inside up out of the way, and will catch these pesky little buggers. Just stretch it from back to front and tape in places that it might sag, don't be fooled it looks like its sticky enough to stay up there by itself, NOT, use the tape to make sure...Simple...

Now for Linda's contribution, she looked up the scientific names of the biggest part of the ones that Babe gave the descriptions on. So, now your job.

Match up the scientific with the common name, do some more research on each, and find out who your real enemies are and then first find a way to "prevent" them from starting in the beds, second a way to control them, and lastly a way to eradicate them. If need be. WE DON'T do bug sprays, worms are bugs and will quickly disappear with your other pests...

Common Names Ant, Fire ants, Centipedes (Common House), American cockroach , Field Crickets, European Earwig, Red Legged earwig (American) , Pot worms (White worms), Springtails, Sow bug, Fly , Mould (Mold) Mites, Snails, Common Garden slug or (Great Slug), NZ Flat Worm

Now its your turn find all the Scientific names to match to them... Have fun. NOW

you know why Slug is so much easier..

Formicid,

Periplaneta australasiae,

Forficula auricularia,

Solenopsis spp.,

Artioposthia triangulata,

Gryllus spp.,

Diptera,

Limax Maximus,

Collembola,

Enchytraeids,

Periplaneta americana,

Acarina,

Scutigera coleoptrata,

Emborellia annulipes,

Isopod,

Gastropods.

Thanks Linda that was really a mouth full -}-}-}

You may send your answers to me [Judy](#) or put up on [blog](#)

See you all next lesson, keep an eye, nose and watch out for - any unusual odors, etc. in your kits, post your results with me, so that everyone can compare their results with yours.

I know that it has probably been pretty confusing the past week or so, I've been remodeling the sites, and the links that were there are gone, and don't work, etc... I promise I'm working on it...

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Lesson 4

OVER half way done, we can make it now!!!

Wow the earthworms are finally starting to eat! (Week 3-4)

1. **What and how much to feed your red worms.**
2. **How to separate the vermicompost kit**
3. **How to tell when enough worms are in the kit.**
4. **What to do with the extras.**

What and how much to feed them.

Here again, I've heard it said "to only feed earthworms what they can eat in a day", well the problem with that is:

In order for the earthworms to consume the feed, it has to decompose, and I don't know of to many things that undergo this type of drastic change in one day, except chicken that's been left out! So, in order to use this formula, either the food has to already be rotten (decomposed) or you have to figure out how long its going to take it to become decomposed.. A lot of figuring, especially when the worms are hungry NOW. Plus of course if you want to turn it into a daily chore, then this might be fine.

I prefer putting on enough feed to last a while, with a variety of times that it decomposes. A continual process, that makes feed available all the time. As it starts going down about half way add some more, what you add today will be ready for them to eat within a week.

By putting the feed only in one area, instead of all over the bed, the worms can "come to dinner" and leave. In the kits, by just adding to the front, in a pile and covering with a damp sheet of newspaper, seems to work well. The bottom of the pile is decomposed and the earthworms eat it, the next layer is what is starting to decompose, and the last layer will be getting there!

By using the newspaper and covering it up as needed, you are adding the additional bedding that is required.

Lesson 4 continue

How to separate your small earthworm kit:

It doesn't do much good to have all the vermicompost in the kit and not be able to use it.

When we separate them, we want to get as many worms and babies as possible out of the vermicompost (bedding). Since about the only place they are healthy and happy is in the kit.. unless of course you want to keep some layers of garbage around your houseplants for them to munch on!

With the kits getting the un hatched egg capsules out is not easy. (That's why I designed AVSA!) So, if you want all the worms and babies out, then the best way to go is:

About a week before you plan to separate them, stop feeding them, keep an eye on the feed, when its almost gone, use a mesh bag (foot part of old pantyhose, works well) filled with goodies (melon rinds, fruit peels, (not citrus), etc.) let these get good and ripe! Place this bag in the end that you have been feeding, wait a day or so and check it, when it has a lot of earthworms around it, scoop them up and put them in some new bedding in a temporary container. If there are still a lot of adults in the old bedding, repeat the process. If not, dump this old bedding (vermicompost) into another container and put the new bedding and adults back into the kit.



Now, to remove the most part of the un-hatched babies from the Old bedding. Wait about a week and put another bag in one end, then wait a day or two and check it, repeat this process for a couple of weeks and most of the egg capsules should have hatched and the baby earthworms been captured around the bag. Since there are about 6-10 babies per capsule, and they won't do well except in the right environment, this process can greatly increase your future production. When you build AVSA you will see the advantages of it. The babies and adults are all together when you separate it.



Now use your vermicompost! Put it around your houseplants, by just putting it on top and watering it in, or mixing it into the potting soil around them.

Mix it one part vermicompost to two parts potting soil for repotting or starting your new plants.

Fill a gallon jug about one-fourth way full of it and add water, shake well and pour around your plants.

Watch the difference it makes, it cuts the amount of water you need, adds nutrients quickly to sick, under nourished plants and makes the leaves nice and green. Its nature's way of taking care of her plants.. the best way...

Lesson 4 continue

How to tell when enough earth worms are in your vermicompost KIT:

Here again, there is a difference of opinion. Some say that only so many per square inch. But then others say that they really overcrowd them and they do fine. Personally I'm always to anxious to start a new unit to let them max out. So, when it looks like there is enough, I move half of them. If it doesn't look like there is enough, I leave them. This tendency of mine is with my general attitude that they work for me, not me for them.. So, if it's a nice day and I feel like doing some physical labor, I separate them. If its a hot, cold, muggy, I don't want too, kind of day then they aren't overcrowded at all!

I feel that if they aren't overcrowded that they will multiply faster, as with almost any type of creature. "Go forth and multiply". Be your own judge, a good indicator is if they start hanging out around the edges of the bins, looking for "new territory", this will usually be the larger adults and breeders.

What to do with the EXTRAS?

Since most people that enter the earthworm, vermicomposting business can't wait to sell their first bunch of earthworms, rightly so, since that is the general aim in the first place, there are some considerations that should help you to decide at which point in time to do this.

Each worm that you sell will produce about 8 babies each 2-4 weeks, so it will produce about 208 to 416 per year. But when you figure that each one of those will likewise start producing at about 3 months old and their babies at three months old. That one worm is worth about 12,288 worms in offspring per year. So the question would be if you sell early, the guy you sell to is getting the production, not you and is that what you really want to do? I have always preferred to get several good working bins and then sell off the excess, later instead of earlier...

I envision a huge demand for earthworms in the very near future, the earthworms have always sold fairly well, but its only when they can be put to a good use that they really become invaluable. Using them for vermicomposting is a very good use.

Keep it clean, feed it to the worms... and enjoy.

Assignment:

Write to me how your kits are doing... [Judy](#) or post on [blog](#) keep checking them for signs of trouble.

Next lesson we start on AVSA and how it works and can work for you.. If you haven't downloaded your AVSA plans yet, now is the time to do it! We will be using these plans in the last lessons, to make scale models and see how AVSA works and how it can work for you!

Judy