Conservation Landscaping for the Lake Tahoe Basin

How To: Composting with Worms

For Fertilizer Management

Vermicomposting is the process of using worms to turn food scraps into nutrient rich plant food. This sustainable practice can be done year round with minimal cost or effort. The process is odorless and you can construct a worm bin with materials found in your home.

Red wigglers are the composting champions! They quickly multiply and feed near the soil surface where there is abundant organic matter. Worm casts contain a high percentage of nitrogen, phosphorus and potassium, the main minerals needed for plant growth; more than typical backyard compost. They also condition the soil with humic acid and contain worm mucus which helps prevent nutrients from washing away.

Use vermicompost just like regular compost but apply half as much. Dig it in around your perennial plants, into your annual beds or spread a light layer on the surface around vegetation. Try mixing it with potting soil to make a great seedling medium. Your plants will love it!

Making a Worm Bin

What you need:

- 2 bins (not translucent, shallow and with a gap between them when they are stacked)
- Drill with 1/4" and 1/16" drill bits
- Shredded newspaper or a coir block (found at local hydroponics stores) for bedding
- A piece of cardboard, brown paper bag or 4 full sheets of newspaper
- Food waste
- 1lb Red wiggler worms (*Eisenia fetida*)

Some local places that sell worms:

Full Circle Compost
(775) 267-5305
fullcirclecompost.com

Peaceful Valley Farm Supply
(888) 784-1722 (call ahead)
groworganic.com

Sierra Worm Compost
Carolyn O'Connor
(888) 967-6266 (call ahead)
sierra-worm-compost.com

1. Drill around 20 holes with the ¼" drill bit into the bottom of one of the bins.

2. Drill approximately 30 holes with the 1/16" bit into the lid of one of the bins.

3. Place the bin with the holes in the bottom into the second bin. Add wet (squeeze out excess moisture) shredded newspaper or a moistened coir block to the bottom of the bin. If using newspaper, add a couple handfuls of soil to help the worms digest their food.

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4. Add the worms.

5. Add some food. Put the food in one area and rotate around when adding food in the future.

6. Cover the whole area with the cardboard or other material that you are using. Ensure that the entire area is fully covered.

7. Put on the lid with the holes in it.

Store in a well ventilated area where temperatures stay between 55 and 80 degrees.

After about six months, you will be ready to harvest some compost. Stop feeding for a week or two. Pile all the compost to one side of the bin and add new bedding and some of the worms' favorite food (succulent, sugary foods such as melons and cucumbers) to the other side. Wait a few days and the worms should migrate to the new food. Harvest the old pile, picking out and returning the straggler worms to the bin.

Things to think about...

- A good bin sizing rule of thumb is to have 1 to 2 square feet of surface area per person that will be using the bin.
- I recommend making a bin that allows for excess juice to flow out into a secondary bin.
- Worms love fruits and vegetables, will handle some more starchy and acidic foods and aren't too keen on garlic and onions. Stay away from feeding them dairy or meat.
- Always cover the food waste completely with newspaper or cardboard to reduce the likelihood of vinegar fly infestation and to keep the feeding area dark.
- Once the worm bin environment is established, there will be a host of additional microorganisms to help with the composting. This is normal and usually beneficial. If there is an overabundance of any particular bug, it's time to investigate. The Happy D Ranch website has a section on figuring out what bugs are in your bin and what needs to be done to correct the imbalance.
- A properly tended bin will not smell. A foul odor means something is out of balance and needs attention. The usual problems are: not enough air, too much food or the bin is too wet. To correct these common problems, drill more ventilation holes in the lid to provide adequate air flow, apply food at a slower rate to avoid overfeeding and add more bedding to absorb moisture.
- Freezing or grinding up the food will speed up the recycling time substantially.
- Shallow bins with a greater surface area work better. Worms live at the surface of the soil and won't use much more than the top few inches of the bin.
- Don't use glossy magazine paper or paper with petroleum based inks. They can harm the worms or create compost that contains harmful residual toxins.

In California:
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