Vermicomposting

Cultivating worms to eat our food and paper waste and produce the best fertilizer known to man

Lumbricus rubellus (common redworm)
Vermicomposting

- Worm composting is neat, easy, and odorless
  - you are managing hardy worms instead of bacteria
  - no turning required
  - no proper mixture of materials required
  - no chopping
- A great way to turn hard to dispose food wastes and office paper into fertilizer
- Can be done indoors, on the patio, or in any moderate temperature place
Vermicomposting

• And...
  the finished product, worm castings, is a nitrogen rich fertilizer which can be used on potted plants both indoors and outdoors
• Reduces or eliminates the need for purchased fertilizer
• Is of great interest to children and adults alike - those slimy creatures become pets.
Any size bin can work

- A rule of thumb is two square feet of surface area per person or one square foot per pound of waste per week.
- Worms will reproduce to fill the box but will not overpopulate
  - hermaphrodites (both male and female organs)
  - reproduce at two months of age
- Should start with a pound of worms which must either be purchased or donated by a friend
Selecting a bin

For sale from Santa Clara County

Buy or build your own

Don't use chemically treated woods or highly aromatic woods

http://www.wormdigest.org/wormbins.html
A Home Made Worm Bin from an Old Recycling Bin

Old fence wood

Many 1/4" drain and air holes

Old 2x4 from anything
Inside a Worm Box
Organization of the bin

The bedding material should be damp but not so wet one can squeeze water from it.

- **Cover**: at least four inches
- **Wet layer of paper**: greater than four inches
- **Food layer**: mixed with coffee grounds
- **Air circulation**

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Dry Shredded Paper or Leaves or Pine Needles

8” to 16”
Bedding material

- Shredded office and junk mail paper
  - can dry easier than news print
- Shredded boxes and newsprint
  - These are valuable recyclables so maybe the worms shouldn’t get them
  - avoid glossy print
- Dried partially decomposed leaves
- **No** soil - these worms are litter dwellers
Worm Food

- Vegetable and fruit scraps
- Pasta, cooked beans
- Coffee grounds complete with filters
- Tea leaves, bags
- Egg shells
- Paper towels, napkins
- Banana peels and egg cartons
What to avoid

- No animal products - meats, bones
- No dairy products - cheese
- Be careful with breads (because of molds)
- No seeds (because they won’t break down)
- Yard clippings
- No pet wastes
- No oils or plastics
- No soil
Locating the bin

• Ideal temperature is between 55°F and 77°F
• Plenty of air circulation
• In the shade during summer especially if a plastic bin is being used
• Good locations include under a shade tree, patio, garage, or laundry room (commercial bin only)
• One speaker at our class keeps one in her living room
Source of Worms

The Worm Dude
www.thewormdude.com
(408) 227-5267

Sonoma Worm Farm
1-800-447-6996
www.sonomavalleyworms.com

Common Ground
650-493-6072
www.commongroundinpaloalto.org

State of California information resources at:
www.calrecycle.ca.gov/organics/worms
Harvesting Castings

- Castings are toxic to worms and should be harvested when most of the bedding materials have become dark castings.
- There are many ways to harvest:
  - Vertical harvest - take lower layers
  - Horizontal harvest - move finished materials to one side and feed on other side
  - Dump and sort - spread out and pick out worms
  - Variants of above
- Keep the worms - use the castings
Using Worm Compost

• Slow Release Nitrogen Rich Fertilizer
  - I use it instead of fish emulsion on bedding plants in my greenhouse
  - Spread around potted plants
  - Spread around vegetables or flowering plants in the garden
  - Can be sifted onto lawns
  - Incorporate into soil around shrubs and trees

• Can be incorporated into a planting mix

• Preferred compost for compost tea brewing applications