Vermicomposting

Lumbricus rubellus
(common redworm)
Vermicomposting

• Environment for redworms
  - to eat vegetable and fruit food waste
  - dispose of office paper and junk mail

• Different than backyard compost pile
  - managing hardy worms instead of bacteria
  - no turning required
  - no proper mixture of materials required
  - no chopping
Vermicomposting

• Produces worm castings
  - a nitrogen rich fertilizer
  - use instead of purchasing fertilizer

• Reduces food waste

• Neat, Easy, Odorless, Fun!
Organization of the bin

The bedding material should be damp. As moist as a wrung out sponge.

8” to 16”

Shredded Paper

Bedding material
Mixed with coffee grounds
Or
A handful of soil

cover
at least four inches

greater than four inches

air circulation
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
Any size bin can work

- **Rule of thumb**
  - 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**
Worm Facts

• Can eat ½ body weight per day
  • 1 lb. worms can eat ½ lb. of food per day = 3 1/2 lb. of food per week
Selecting a bin

For sale from Santa Clara County

Don’t use chemically treated woods or highly aromatic woods

Buy or build your own

composters.com
A Home Made Worm Bin from an Old Recycling Bin

- Old fence wood
- Many 1/4" drain and air holes
- Old 2x4 from anything

UCCE
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
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**: 8” to 16”

Dry Shredded Paper or Leaves or Pine Needles

Bedding material mixed with coffee grounds

Air circulation
Feeding the Worms

1) Remove top materials

Dry Shredded Paper or Leaves or Pine Needles

2) Add food scraps

Bedding material mixed with coffee grounds
Feeding the Worms

3) Wet old paper and add more wet paper

Dry Shredded Paper or Leaves or Pine Needles

Bedding material mixed with coffee grounds
Feeding the Worms

4) Put back dry material and add more to fill box

5) Close lid

Dry Shredded Paper or Leaves or Pine Needles

Bedding material mixed with coffee grounds
Source of Worms

Blue Ridge Vermiculture - San Jose
408 227-5267 Ask for Jerry or email
TheWormDude@Comcast.Net

Sonoma Valley Worm Farm
800-447-6996

Common Ground - Palo Alto

www.calrecycle.ca.gov/organics/worms

A friend who already does Vermicomposting
- Worms reproduce quickly so ok to share
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