

# Compost Happens!

Lee Ann Fox – 209-743-2951  
[www.WormsofWisdom.com](http://www.WormsofWisdom.com)  
[wow@mlode.com](mailto:wow@mlode.com)



- The controlled process of breaking down plant trimmings and kitchen scraps into a dark colored, sweet-smelling soil amendment call compost.
- "The degradation or reduction of organic matter to a relatively stable yet living mixture of humus and humus-like materials"

**What is composting?**

- Browns(carbon)
- +Greens(nitrogen)
- +Air
- +Water



- Temperature is the key indicator of how you are doing
- It can happen quickly (one month) or slowly (one to two years)



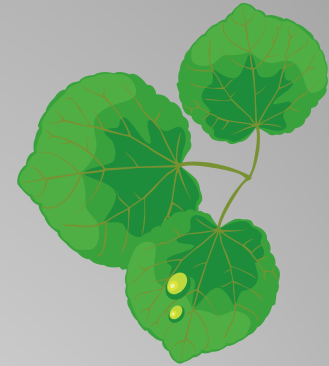
**What is composting?**

- Diversion from the landfill
- Replace soil being depleted on the earth
- Clean/filter/cool the earth
- Conserves water - amazing! Especially vermicompost (worms)
- Improves the structure in both clay and sandy soils
- Adds nutrients to the soil – ready and available
- Reduces the need for fertilizer and pesticides!
- Save money
- Happy Plants



**Why compost?**

- Grass clippings
- Plant trimmings
- Leaves
- Weeds
- Sawdust (untreated/unpainted)
- Plant derived food scraps
- Wood chips
- Cardboard/newspaper
- No bleached paper



**What is compostable?**

- Manure
- No cat or dog feces
- No wormer (age this out)
- Ashes - limited
- Feathers, hair, leather, cotton fabric
- Coffee - filters
- Tea – some bags



**What is compostable?**

- Dog and cat manure (carry pathogens)
- Fats, meats, dairy (smell and attract)
- Infected plants
- Evergreen leaves - just slow to break down - acidic
- Weed that have gone to seed
  - (135° for three days will do the trick)
- Poisonous plants



**What is NOT compostable?**

- No-fuss/lazy pile
- Active pile--> 120° - 157 °
- Lasagna-sheet composting
- Vermicomposting (using worms)
- Plastic containers
- Partially buried PVC
- Pit and Trench
- Closed-Air System
- Windrow



## Types of composting systems



- No-fuss/lazy pile
  - Just start a pile
  - Compost Happens!



**Types of composting systems**

- Active pile – (will kill most worms)
  - 3' x 3' bins
  - --> 120° - 157 ° 4 to 7 days
  - Too quickly or too hot will kill other helpful organisms
  - Turn every week
  - Glisten with water
  - Done in 6 weeks!



## Types of composting systems

- Lasagna Composting – sheet mulch



- There are several advantages to sheet composting
- It is an easy and uncomplicated method of composting.
- It can be done a little at a time as materials are available.
- It can be done on a large or small scale.
- It can be used to improve soil or add to existing beds and borders.
- It is an easy way to expand a garden with a minimum amount of equipment, material and time.

## Types of composting systems

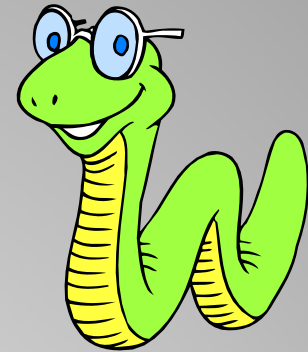
- Lasagna Composting – sheet mulch – continued
  - Remove grass or other vegetation
  - Good drainage under pile
  - Remove pernicious plants/weeds (i.e.berries)
  - Cover ground with newspaper/cardboard (wet)
  - Top with nitrogen
  - Cover with carbon
  - Continue to 18"
  - Cover with plastic to keep water low
  - Start in the fall and use in the spring



## Types of composting systems

- Vermicomposting (using worms)

- Composting worms are different
  - Red worms (*Eisenia fetida*)
- Can eat 1/2 their weight everyday
- Five hearts
- Hermaphroditic
- Eight happy worms can become 1,500 in six months (1 lb)
- Container must be 2'x2' per person
- No teeth so it needs to be mush (freeze? masticate?)
- 70% moisture/70 degree temperature
- They can freeze and come back - amazing!



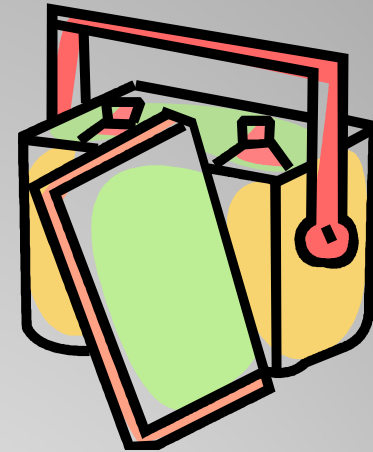
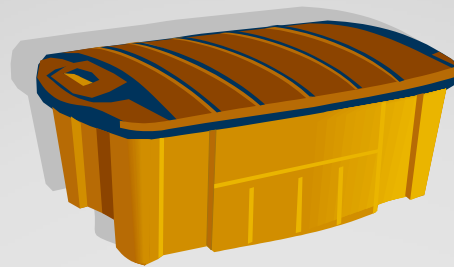
## Types of composting systems

- Vermicomposting – Continuous Flow
  - Some commercial operations use this
  - We built this from discarded lumber and saved a gate from the landfill



**Types of composting systems**

- Plastic Container
  - Old ice chest
    - Save it from the landfill!
    - Keeps temperature steady
  - Plastic bin
    - Rubbermaid



**Types of composting systems**

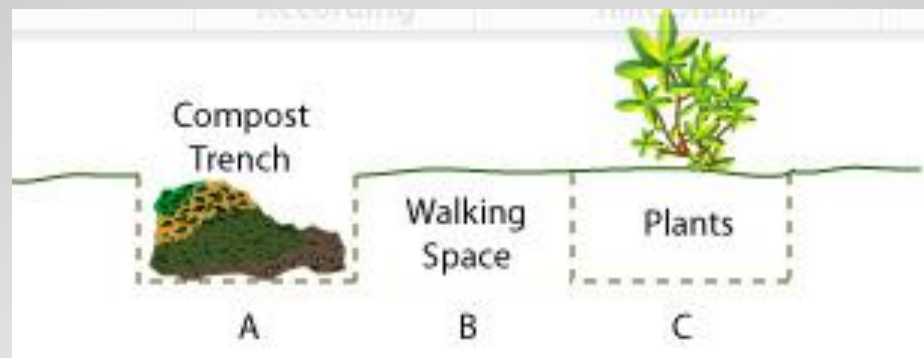
- Buried PVC
  - Put some holes for air flow
- Easy breezy harvest



**Types of composting systems**



- Pit and Trench
  - Dig a trench
  - 6" of food
  - 12" of soil
  - In 2 years you can plant



**Types of composting systems**



- Closed-Air System
  - Use two trash cans to rotate
  - Tight fitting lid
  - Wire on the bottom to avoid critters
  - Cover each layer with dry soil or sawdust (4-6")
  - When  $\frac{3}{4}$  full, leave for 6 to 10 months and start using the other can
  - Inoculate with worms

**Types of composting systems**

- Windrow
  - Up to 12'/20' x 6'/10'
  - Commercial composting method
  - 18" and inoculate with worms



**Types of composting systems**

- Compost

- It's done when you can't recognize anything
- Should smell like good soil
- If not done it will rob from the soil
- Remove rocks and seeds by screening
- Testing is fun
- Make compost tea
  - Easy way to dilute and test
  - Doesn't require screening
  - Use hemp or something organic for bags



## Harvesting

- Vermicompost

- Should smell like good soil
- Remove rocks and seeds by screening
- Testing is fun
- Make compost tea
  - Easy way to dilute and test
  - Doesn't require screening
  - Use hemp or something organic for bags
- Use 100% for starts and 25% for plants
  - Diminishing returns



## Harvesting

- Education and good signage are key
- Don't compost bleached paper
- Trust your nose
- Try for "pre-consumer" feed
- Use 5 gallon buckets with Gamma lids
- Flies can't dig (always cover)
- Ants can't swim (build a mote)
- Remove gnats with lemon juice
- Lock it down if you must!

## Pointers

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