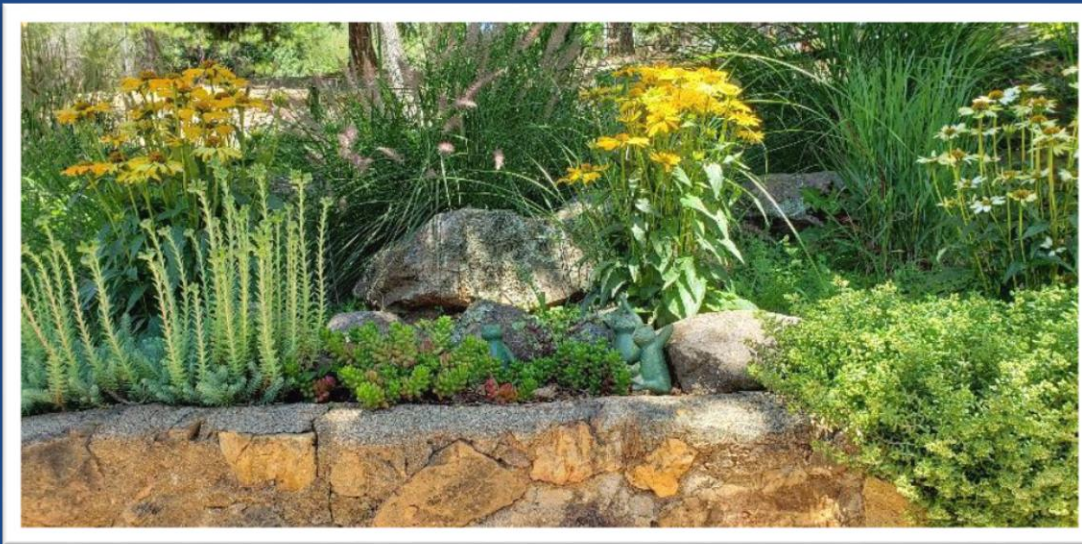


# Backyard Composting Basics



Date 04/03/2021

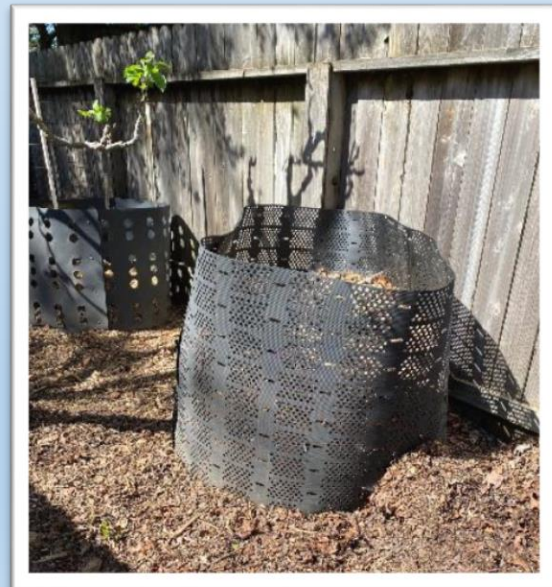
Presented by Cindy Young,  
Dave Hale and Debbie Hillel





## Backyard Composting Made Easy

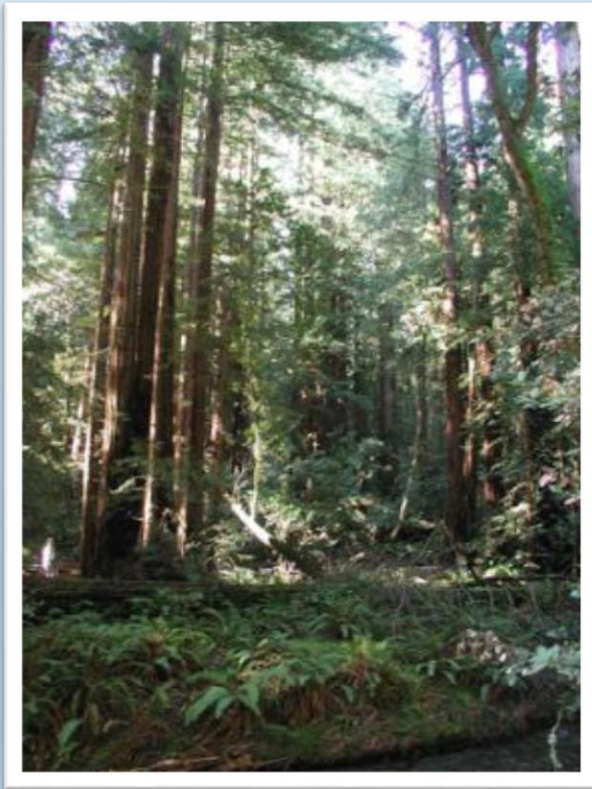
This class  
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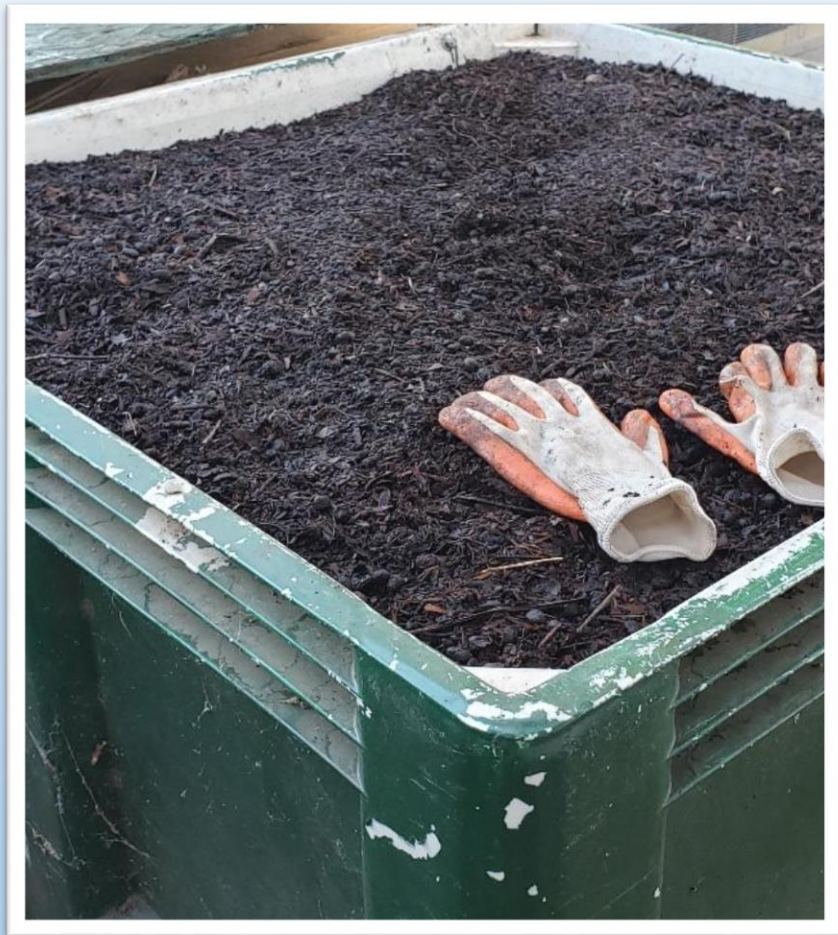


# What is composting?

- In nature compost happens. Composting is a natural process by which organic materials decompose.
- Backyard composting is a controlled or managed version of the natural process.



# What is compost?



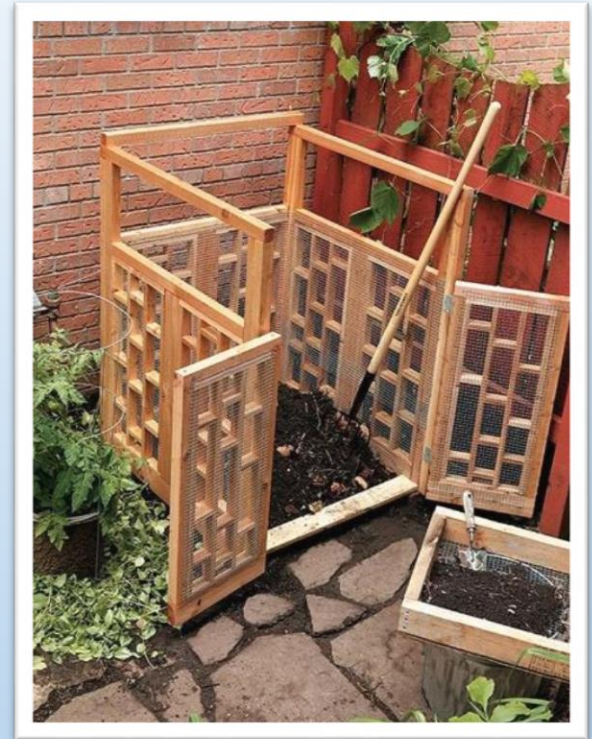
- Compost is the soil amendment product that results from proper composting.
- The end product of the compost process is a humus-like material that will increase the health of the soil.
- Definition of humus: The end product of organic compost that has gone through the full decay process and all of its nutrients have been released back into the soil.





# Why Compost?

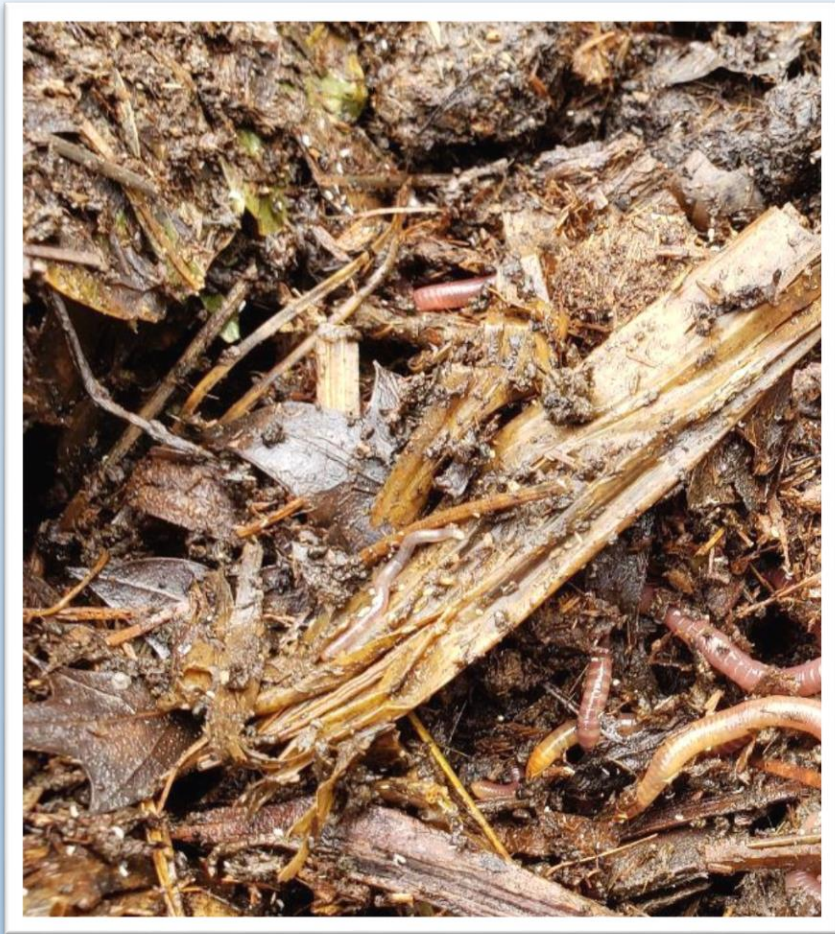
- Composting saves money
- Improves the fertility and health of the soil
- Saves water by helping the soil hold moisture
- Reduces soil erosion
- Benefits the environment
- Replaces the need for harsh chemical fertilizers
- It's surprisingly easy, anyone can do it...on any budget... compost happens
- If done correctly there is no offensive odor, no annoying insects or critters
- Compost bins can look attractive too!



**Fresh from the garden no pesticides, no holes**



# What is in compost pile?



- There are many different species of microorganisms in a compost pile. The microscopic bacteria and fungi are the real workers in the compost pile, but they are just one part of the complex and fascinating ecosystem we call the “**Compost Food Web.**” Many other organisms are in the compost such as protozoa, nematodes, springtails, mites, beetles, millipedes, sowbugs, and worms.
- **In one teaspoon there can be up to 1 billion bacteria or 250,000 - 500,000 bacteria within the dot of a period at the end of a sentence!**



# How does compost affect the soil?

- Compost is like a multivitamin for your soil
- It helps prevent soil erosion, promotes soil fertility, and stimulates healthy root development
- Compost improves soil structure by adding organic matter
- It increases water-holding capacity of soil so that you don't need to water as often
- Compost helps keep heavy clay soil from compacting, meaning that the soil is easier to work (crumbly)
- It also improves the structure of sandy soil





# How long does it take?



- Compost happens but your level of attention dictates how quickly
- Generally, it should take from three to six months to make a single batch of compost
- Depending upon the blend of materials, how often the pile is turned, and the moisture content





# How do I know when my compost is ready?



The pile no longer heats up even when turned or moistened



The pile volume has decreased by roughly half



The majority of the material looks like dark, rich, crumbly soil



It smells sweet and earthy



# Composting Methods



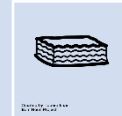
Cold method called passive composting or static composting



Hot method



Vermicomposting (worm composting)



Sheet or lasagna



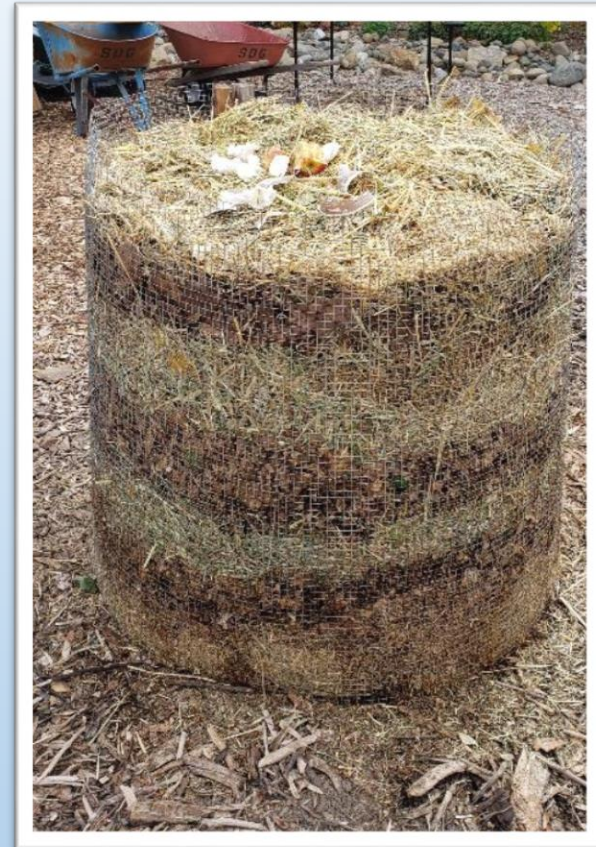
Pit or trench





# Control Factors

- 1. Aeration**
  - Turn pile when activity slows
- 2. Moisture**
  - Should be at a level of 45-60%. Consistency of a wrung-out sponge
- 3. Volume**
  - Minimum of 3'x 3'x3' (one cubic yard)
- 4. Particle size**
  - 1" to 3" diameter at the largest point
- 5. C:N Ratio**
  - 30:1 equal volume of "browns" and "greens"



# Steps to Build a Simple Compost Pile



The simplest way to compost is to create a pile or heap in the yard, tending to it as necessary. **Situate it in a dry, shady spot, close to a water source if possible.**

- **Clear a space** in your yard or garden, exposing bare soil.
- **Build a base layer of straw or twigs.** A few inches helps provide good drainage.
- **Add layers of materials** to be composted one at a time, alternating between brown and green materials.
- **Incorporate a nitrogen source** to start decomposition. Some gardeners add a handful of nitrogen fertilizer to jumpstart the process.
- **Keep the pile moist.** It's recommended that the materials should feel like a damp sponge, but unable to squeeze water out if you grab a handful.
- **Turn the compost pile** every couple of weeks to allow the center of the pile to "heat up". Aeration provides oxygen to the microorganisms involved in the composting process and mixes the pile.

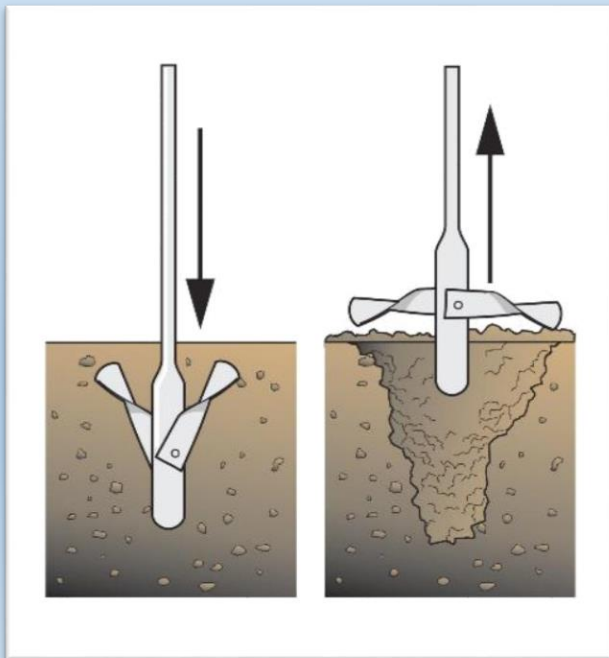




# Compost bins



# Helpful Composting Tools



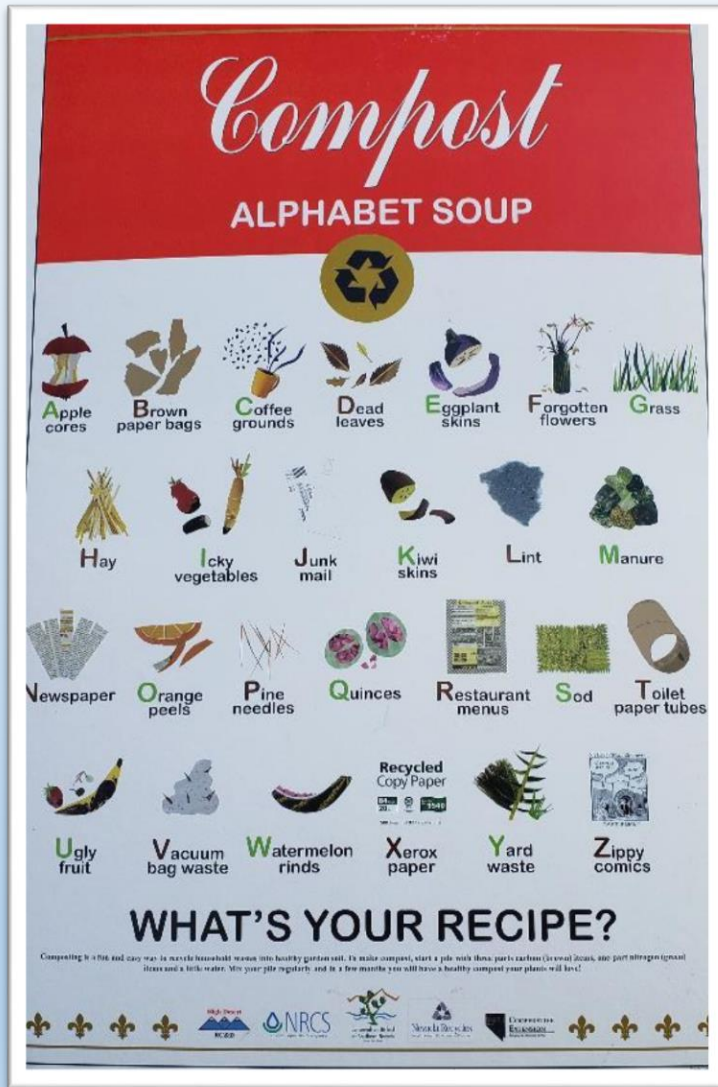


# What is nitrogen (green)? What is a carbon (brown)?

Greens/Nitrogen	Browns/Carbon
Grass clippings	Fall leaves
Fresh landscape trimmings	Dried landscape trimmings
Alfalfa hay	Straw/Pine needles
Fresh weeds (no seeds)	Dryer lint (cotton or natural fibers)
Fruit and veggie scraps	Cardboard, cardboard rolls
Coffee grounds/tea bags	Shredded newspaper
Aged chicken manure	Wood shavings
<b>Do not add:</b>	
Dairy, meat, fat, oils, bones, pet and human waste, treated or painted wood, metals, glass, seafood scraps, stickers from fruits and vegetables	



# Alphabet Soup



## Browns and Greens





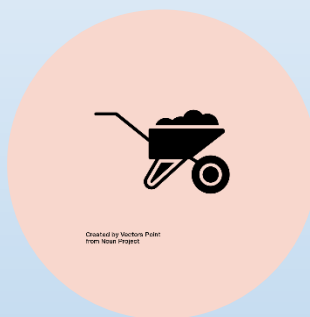
# Leaf Holding Bin



# How to Use Compost



SOIL  
AMENDMENT



MULCH

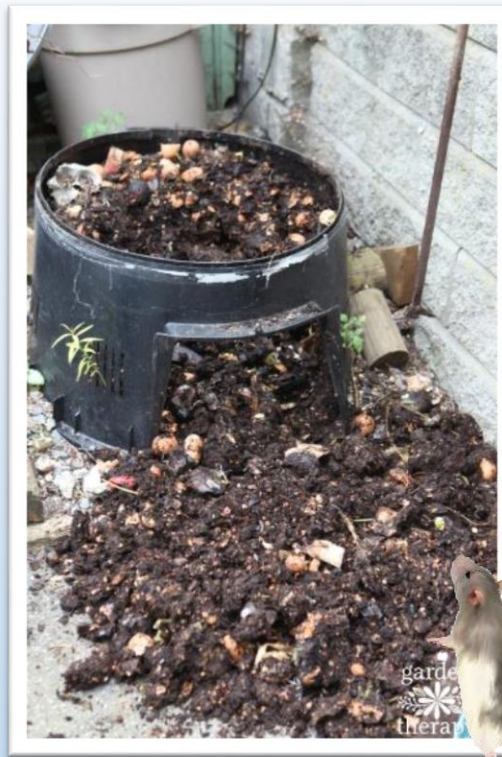


POTTING MIX

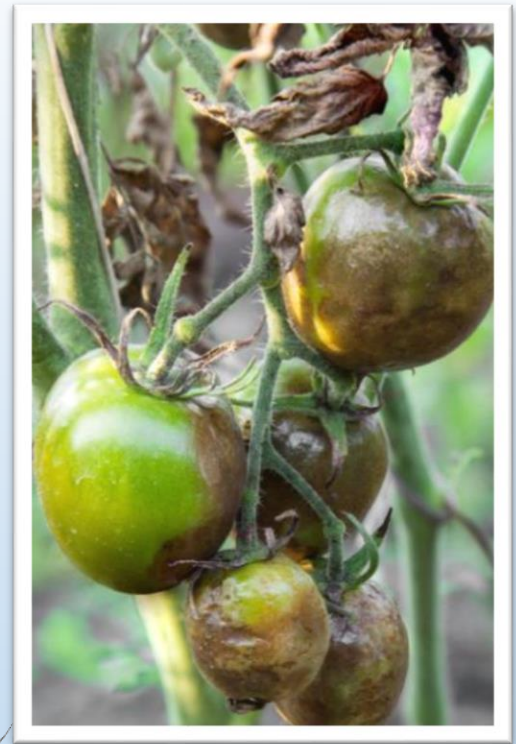




**What's wrong with this pile?**



**Who is visiting my compost bin?  
And why?**



**Do I add these to my compost bin?**





# Troubleshooting

Problem	Cause	Solution
Bad odor (rotten smell)	Too much moisture	Turn the compost or add dry porous material
Bad odor (ammonia smell)	Too much nitrogen Compacted leaves Inadequate air	Add high-carbon materials Turn the compost Make the pile smaller
Low compost temperature	Pile too small Too little moisture Too much moisture Too little air Lack of nitrogen Cold weather Particle size too large	Increase size, insulate sides Add water and turn Turn the compost Mix in dry materials Increase pile size or insulate the pile with straw or plastic Chip or grind materials
Pile is dry throughout	Not enough water, too much wood	Turn pile and moisten, cover pile
Compost pile is damp and warm only in the middle	Pile is too small	Mix pile with more material and moisten
Pest infestation – dogs, rodents, insects	Improper food scraps added Food scraps not covered	Don't add meat, or meat by products Place kitchen waste in the center of the pile Use a rodent resistant bin
Ants	Compost is too dry	Moisten your compost
Neighbor complains	Compost is ugly	Get an attractive bin or cover



# Questions



# References:

- Clark County WA Master Composter/Recycler Training Manual 2006
- *California Master Gardener Handbook* c2015
- *WSU Master Gardener Training Manual 2005*. Composting section by Craig G Cogger Extension soil scientist & Dan M Sullivan, Extension soil scientist, Oregon State University; and James A Kropf, Extension agent, Pierce and King counties, WSU
- Regional Recycling Backyard Composting Guide
- UCCE Placer and Nevada Counties Basic Composting flier
- Clark County Master Composter/Recycler Program Home Composting flier
- *Home Composting Made Easy* by C Forrest McDowell, PhD & Tricia Clark-McDowell c 1998, 2002
- *Backyard Composting Your Complete Guide to Recycling Yard Clippings* by Harmonious Technologies, Sebastopol, CA c 1992 – 1997
- *Let It Rot the Gardener's Guide to Composting* 3<sup>rd</sup> Edition by Stu Campbell c 1975 – 1998
- *The Complete Compost Gardening Guide* by Barbara Pleasant & Deborah L. Martin c 2008
- <https://homesteading.com/your-ultimate-guide-to-diy-compost-bins-for-homesteading/>

