

Fall into Gardening NOW to Spring Ahead Next Year



Gardening Chores
for the *Fall*



Preston Public Library

October 1, 2015

Tracy Burrell – Ruby Level Master Gardener 2013, Master Composter 2010

Before We Start

- Grab the handouts
- What's a Master Gardener?
 - In CT, you've completed ~100 classroom hours and 60 outreach hours
 - Advanced Master Gardener: an additional 20 classroom hours, 40 outreach hours and a Hot Topics class
 - Ruby Level: 100 classroom hours and 200 outreach hours
 - <http://mastergardener.uconn.edu/>
- What's a Master Composter?
 - In CT, you've completed ~20 classroom hours, attended two field trips and completed 2 outreach activities



*Master Gardeners know the **BEST** dirt! –we don't know everything; but we do know where to look*

Fall into Gardening NOW Topics

- Cabin Fever
- Winter Dreams
- A Cup of Coffee and a Glass of Wine
 - What, What, What, What, What, What
- Hey, Baby, What's Your pH?
 - Get Your Soil Tested NOW
- General Fall Tasks

Cabin Fever

(my garden in winter)



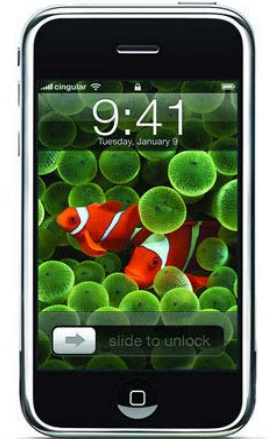
Winter Dreams

(my garden in summer)



A Cup of Coffee and a Glass of Wine

- **What Went Well This Year?**
 - What Did You Learn?
- **What Could Have Gone Better?**
 - What Did You Learn?
 - Let It Go – It's OK Not to Like Something
- **What Do You Want to Try Next?**
 - What Do You Know/Need to Learn About It?
- **What's Your Budget?**
 - Plants, Tools, a Shed, Professional Help, etc.
 - I've Been a Very Good Girl, Santa...
- **What's Happening Next Year?**
 - How Much Time Can I/Will I Spend in the Garden?
- **What Can I Do Now?**
 - Make a list



Hunk du Jour.

Hey, Baby, What's Your pH?

Get Your Soil Tested NOW:

- <http://www.cag.uconn.edu/plsc/soiltest/index.php>
- Lab is not as busy in the fall
 - The typical turn-around-time for results is 3 to 4 business days from time of sample receipt except during April and May when it may take 1 to 2 weeks due to heavy sample load (Soil Test Lab web site)
- Amendments to the soil have time to sink in over winter

Hey Baby, What's Your pH?

- pH: relative acidity or alkalinity of the soil
- Ranges from 0-6 acid (sour) , 7 neutral, 8-14 alkaline (sweet)
- CT soils are generally acid
 - Acid soil loving plants include azaleas, blueberries, hydrangeas, rhododendrons
- Most plants do well in 6-7 pH



A Soil Test is More Than Just Testing the pH

- **Standard Nutrient Analysis** – Samples are analyzed for soil pH, macro and micro nutrients (calcium, magnesium, phosphorus, potassium, iron, manganese, copper, zinc, aluminum and boron) and estimated total soil lead. Soils are hand-textured and a visual estimate of the organic matter content is made. Limestone and fertilizer recommendations are made based on results. (Soil Test Lab web site)

Hey, Baby, What's Your pH?

How Often?

- Every three years, but if you've applied significant amendments to your soil, to adjust the pH or to improve fertility, test again a year later.

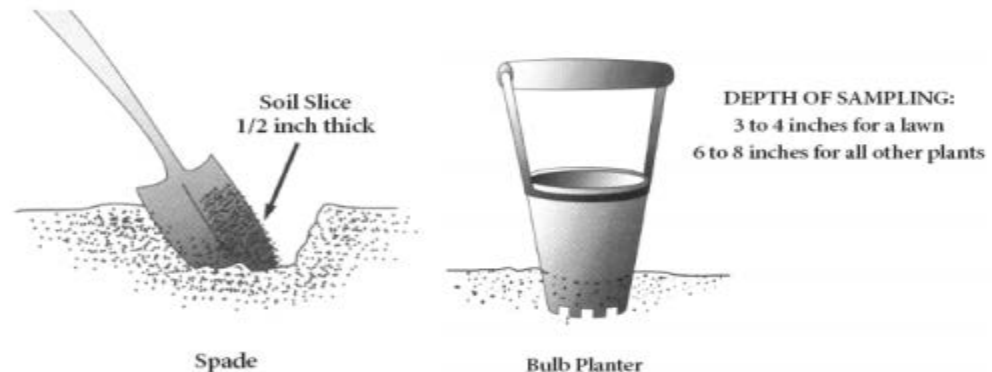
Where Can I Get a Soil Test Kit?

- New London County Extension Center, 562 New London Turnpike, Norwich, CT 06360-6599
 - Tel (860) 887-1608/Fax (860) 886-1164
 - Email: newlondon@uconn.edu
 - Cost: \$8, plus \$2 for shipping
 - Call ahead to make sure someone is in the office
-
- CT Agricultural Experiment Station (CAES): <http://www.ct.gov/caes/cwp/view.asp?a=2836&q=378202>

General Process

1. Using a spade, trowel or bulb planter, take cores or thin slices of soil from 10 or more random, evenly distributed spots in your sample area, to the appropriate depth indicated above.
2. Put the cores or slices of soil in a clean container, and thoroughly mix them. Transfer at least ONE CUP of the soil mixture to the plastic bag and seal.

How to Sample



General Fall Tasks

- **Get Your Soil Tested!!!**
 - Determine what needs to be done and schedule it
- **Keep harvesting, if that works for you**
 - Tip: Hang your tomato plants upside down in the garage
- **Keep deadheading, especially your container plants**
 - Tip: Follow the sun for your container plants
- **Keep weeding**
- **Keep watering until the 1st frost, especially any trees and shrubs planted this year**
 - Tip: Keep an empty tuna or pet food can around to gauge rainfall
- **Aw, Ma, Can't I Stay Out a Little Bit Longer? – Get your plants ready to come inside**
 - Put them in a shadier spot for a couple of days
 - Once they're inside, keep it 'light and breezy'

General Fall Tasks

- **Divide Perennials** - (examples: hostas and Siberian irises) Replant in another part of your garden or give them away (plant swap!!!)
- **Prune** - Check your list of plants that need to be pruned in the fall and schedule it on your calendar
- **Sanitation, Sanitation, Sanitation** – Pick up/remove any diseased leaves, decaying, rotten fruit, etc.
- **Add compost to your garden beds**
 - Consider mulching perennial beds and/open spaces, like your vegetable garden
- **Leaf is a Four Letter Word** – Decide what you're going to do with them
 - Compost, mulch, leaf mold, bag for collection, etc.
 - don't forget to leave some for the birds

General Fall Tasks

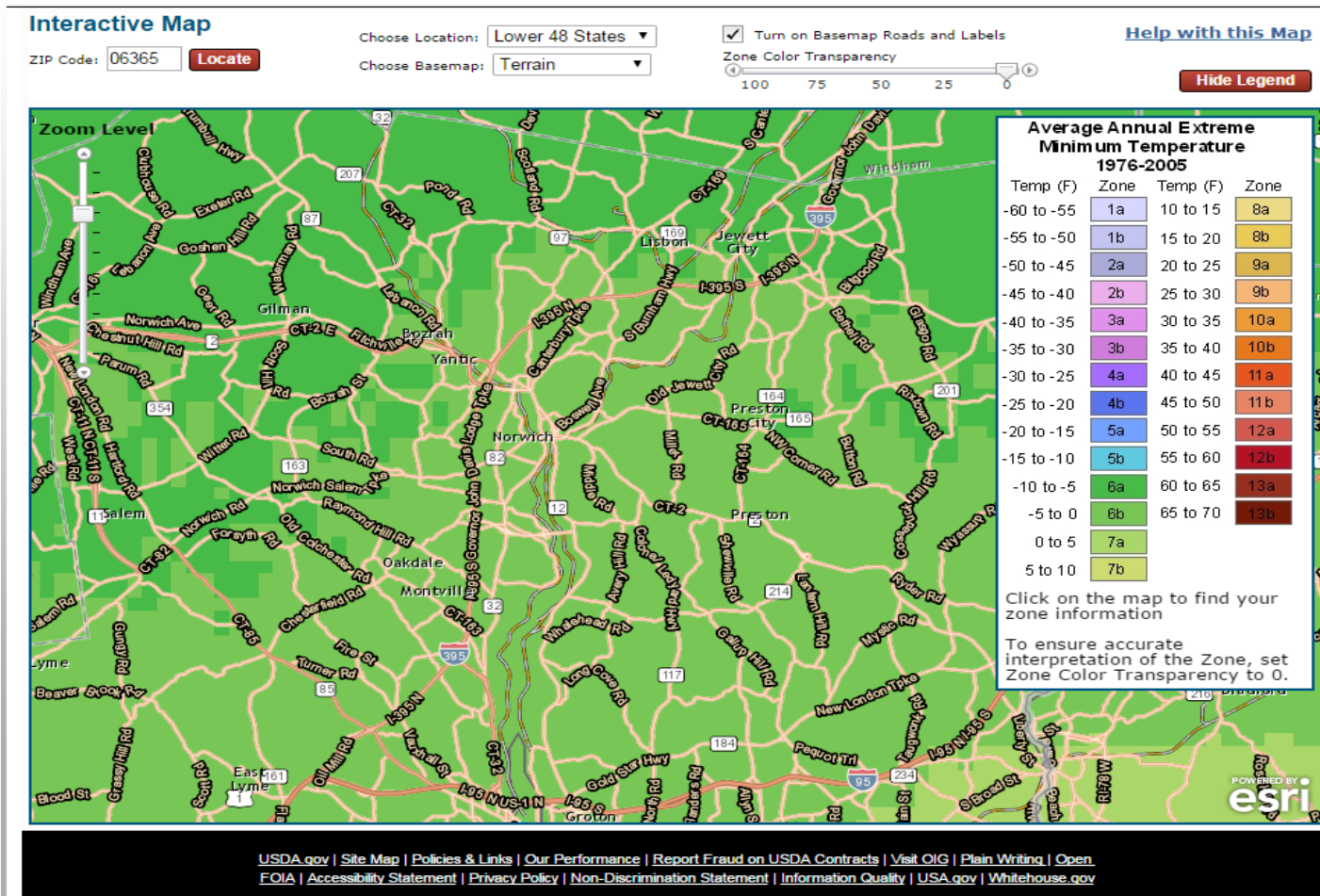
- **Is the Romance Over?** – Take a good, hard look at those garden accessories (example: tomato cages) – do they still work for you, or is it time to say goodbye?
- **(Can you still) Read the Label?** – Mark the bottle so you know what it is next spring!
 - Tip for next year: Take photos of the bottle and the instructions
- **Rattle Those Pots and Pans** – Clean your pots, trays, etc., with 1/9 ratio bleach/water solution
 - Tip: Consider running smaller pots through the dishwasher
 - If you're going to reuse potting soil, pick out any plant matter and find a dry place to store it
- **Have your Tools Sharpened and/or Repaired** - Make sure your tools have a home (ex. An old wastepaper basket for long tools)
 - Use linseed oil on wooden handles (check the manual or the manufacturer's web site for care info)
- **Place Your Orders:** catalogs, seeds, supplies
- **Wash/Disinfect Any Garden Tool Bags, etc.** - Wipe down posts, trellises, garden stakes, etc. - anything you used to support, hold, contain your plants
 - I hand wash those plastic strips used to stake tomatoes, etc. and then store them

General Fall Tasks

Perennials in Pots General Guidelines:

- Perennial is two zones hardier than the zone you live in – leave outside
- Perennial is one zone hardier or is in your zone – keep in the garage, bury the pot in the ground, or plant
- Keep watering, don't fertilize

<http://planthardiness.ars.usda.gov/PHZMWeb/InteractiveMap.aspx>

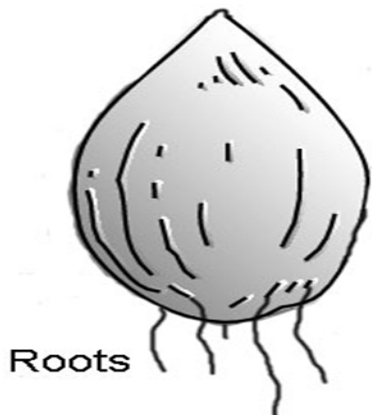


General Fall Tasks

- **Fall is a Great Time to Plant!**
 - Bulbs - Bulbs need love, too! Don't plant them and forget them!
 - **Tender Bulbs** – Example: dahlias. Gently dig them up after the 1st frost, leaving the foliage on. Store them in an airy, protected place for 2-3 weeks, then cut the foliage off
 - Trees and shrubs
 - Garlic
 - Cool weather crops – example: spinach



- **Seeds**
- Keep your seeds in a cool, dry place
- Seeds can still germinate anywhere from 6 months to years (or centuries)
 - Test Germination:
 - Take 20 seeds from packet; place them in a moistened towel
 - Roll the towel up and place it in a plastic bag – label and date the bag!!
 - Check the seed after 2-3 days, then daily for ~10 days
 - Divide the number of seeds tested by the number that germinated to get the germination percentage
 - Ex. 4/20 seeds germinated = 20% germination rate

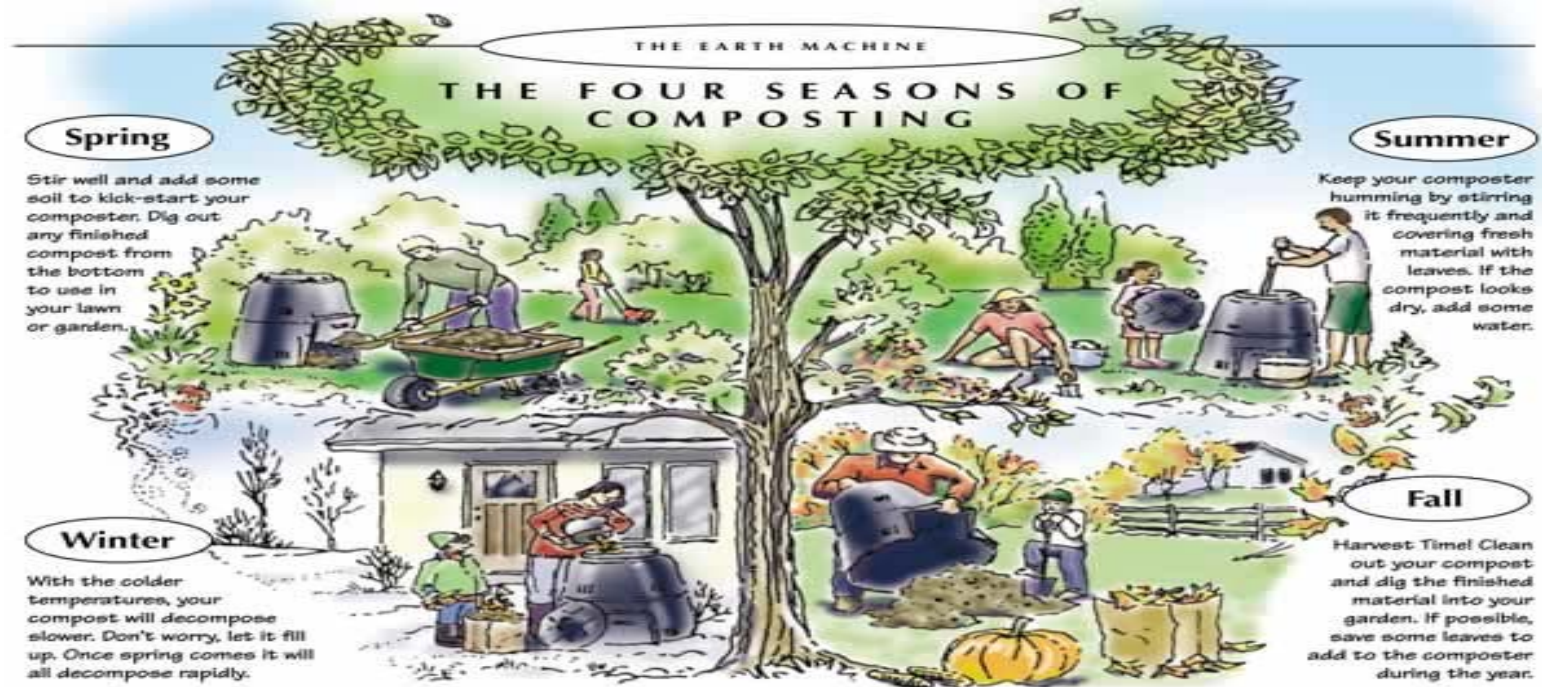


Ask me about
cover crops!



Composting

Feed The Soil and The Soil will Feed Your Plants – and You!



Preston Public Library

October 1, 2015

Tracy Burrell – Ruby Level Master Gardener , Master Composter

Claire Calabretta – Master Gardener, Master Composter

Composting Topics

- Everything Old is New Again (your Great Aunt Beatrice was right)
- What is Compost Anyway?
- Why Compost? Why *Not* Compost?
- Before You Start
- What Can I Compost?
- What Can't I Compost?
- Greens and Browns
- How Do I Build a Compost Pile?
 - Hot Composting
- Types of Composters
- Troubleshooting
- What Can I Do Instead?
 - How to Make Leaf Mold
 - Vermicomposting - A 'Cast (and Castings) of Thousands'
- Additional Resources

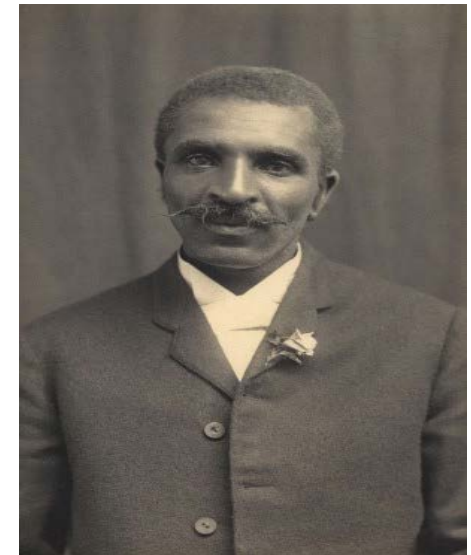
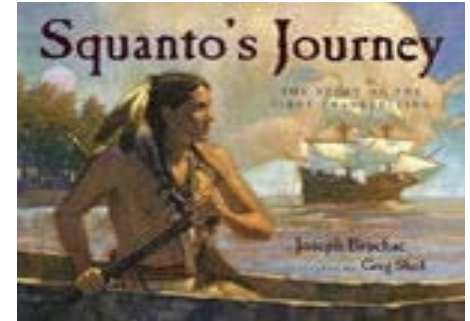


Everything Old is New Again

(your Great Aunt Beatrice was right)

Composting has always been 'cool'

- The earth neither grows old or wears out if it is dunged.
 - Columella, circa 45 A.D.
- **Squanto and the Pilgrims** – the first Thanksgiving
- “Throw nothing away, everything can be used again.”
 - George Washington Carver (1864-1943)
- **Lupo**: “So the killer is a composter?”
- **Bernard**: “Nope – the first rule of composting – no meat.”
 - *Law and Order* (NBC)





What is Compost Anyway?

Compost is decomposed organic matter used to fertilize and amend your soil

- The term has been used for shredded leaves, leaf mold, kitchen scraps, manures, mulches, seaweed, etc.
- Decomposition is a natural part of the nutrient cycle of living things. Composting is simply human intervention to enhance and accelerate the decay process. — Cornell Waste Management Institute

Compost is literally what **YOU** make of it, and how **YOU** make it – goals, materials, techniques

Composting is an Art
and a Science –
UConn's Dawn Pettinelli

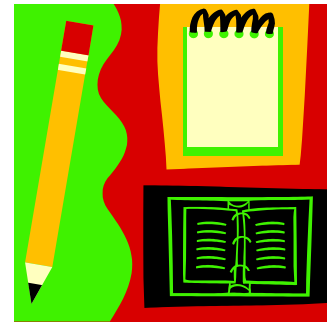


Why Compost? Why *Not* Compost?

- Adds nutrients and beneficial microbes to the soil
 - Soil web
- Improves Aeration and Water Retention
 - Helps aerate clay soils, helps sandy soil from drying out
- Reduces chemicals in our food and water supply
- Saves Money – get out of the food-trash-fertilizer cycle - stop paying for the same thing three times
 - You pay when you buy the food
 - You pay to have it thrown away – trash bags, haulage fees, etc.
 - You pay when you buy compost
- You Get to Bury Your Mistakes - in the Kitchen *and* in the Garden
- Reduces Garbage
 - Organic residuals can comprise over 60% of our solid wastes nationwide – USEPA Municipal Solid Waste in the US: Facts and Figures 2009, Cornell Waste Management Institute



A Cup of Coffee and a Glass of Wine



A few things to consider:

- Space – Where will the composting area be located?
 - Think about convenience and water access
 - Sun or Shade – sunlight will speed the decomposition process, but you'll have to water more
- Time – How quickly you'd like to have finished compost determines how much time you'll spend composting
- Resources – What composting materials do you have access to?
 - Ex. Coffee grounds from your local Starbucks?
 - Remember, some of your resources will be human – will you need help gathering materials, etc?
- Restrictions – are there any restrictions in your neighborhood re: garden waste or outdoor structures?

What Can I Compost?

What to Add - examples:

- Kitchen Scraps - Fruit, Vegetables, Grains (ex. Left over pasta), eggshells – crush them first
- Yard Waste – leaves, grass clippings
 - Pine needles take longer to break down due to their waxy covering
 - Avoid materials that have been fertilized and/or sprayed with pesticides
- Organic Fibers – wool, cotton, silk, etc.
 - Get rid of those old 'tighty-whiteys' and lone socks
- Paper – newspaper, pizza boxes, empty sugar bags, etc.
- Flat Soda, Left-Over Beer and Wine
- Hair – yours, Fido's and Fluffy's
- Coffee grounds
- Hops
- Dryer Lint
- Sawdust – avoid if created from pressure-treated lumber
- Seaweed
- Animal manure – animals that don't eat meat (chicken, rabbit, horse, cow, etc.)
- Urine



Oliver and Kristine

Depending on what your compost is for - perennials vs. a vegetable garden - you may be more flexible re: what you put in your compost pile – ex. Manures, Rhubarb leaves, etc.

What Can't I Compost?

What to Avoid:

- Animal products, like meat, bones, or fats—they attract pests
- Manure from meat eating animals – no Fido or Fluffy
- Dairy products
- Diseased plants
- Weeds
 - Some folks will compost weeds before they set seed, others will 'cook' them in black garbage bags before composting them
- Invasive plants
- Glossy, colored or heavily inked paper
- Charcoal ash



Anything that might be toxic to you. Remember, whatever goes into your compost could go into your garden, your yard, our water supply and ultimately into you.



Greens & Browns

*One part green and 2 parts brown,
makes your compost turn into ground.*

*Add some water and some soil,
turning is the only toil.*

- Ray Akers, The Compost Guru



- Browns are carbon rich materials – Examples: dead leaves, paper, egg shells, bread
 - They generally have a low moisture content
- Greens are nitrogen rich materials – Examples: veggie scraps, fresh leaves, seaweed, horse manure
 - They generally have a high moisture content
- The microbes that decompose materials need both greens and browns to do their work. In general, you need twice as many browns as you do greens
 - Think two shovels of brown for every shovel of green – volume, not weight
 - Don't get hung up on the ratio – some say 50-50; others insist 75-25

Examples of Greens (nitrogen rich) and Browns (carbon rich)

Browns – Carbon rich

- Beans
- Bread and grains
- Brewery waste, hops
- Cereal
- Corncobs
- Dried flowers
- Egg shells
- Dead leaves
- Flour
- Nutshells
- Old potting soil
- Paper
- Pine needles
- Sawdust, wood shavings
- Spices

Greens – Nitrogen rich

- Coffee grounds
- Feathers
- Fresh leaves
- Fruit and vegetable scraps
- Grass clippings
- Hair
- Manures
- Organic packing materials
- Pet bedding – ex. Rabbits
- Seaweed
- Tea bags

How Do I Build a Compost Pile?

- Remember, Compost (or the microbes that make it) 'R' US – it needs:
 - Air
 - Sunlight
 - Water
 - Food
 - Stability
 - Security and Structure
 - Care
- Decide if you're going to be a passive, a semi-active (continual) or an active AKA 'hot' composter:
 - Passive – you create your pile, don't add any additional materials, leave it alone or check occasionally
 - Semi-Active (Continual) – you add new materials, check it regularly
 - Active Hot – you stockpile materials, actively manage the pile, including taking temperatures, turning it every few days, etc.
- Select your spot
 - **3'Lx3'Wx3'H (one cubic yard) – the minimal space needed for your pile**
 - Note: take into consideration that tree roots and trees that have lots of suckers can grow into your compost pile – also note that heat and moisture from the pile might impact buildings
- Gather your materials and tools
 - Tools – start with a pitchfork (or even a shovel) before you buy other items
 - You can also buy aerators, thermometers, sieves, etc.



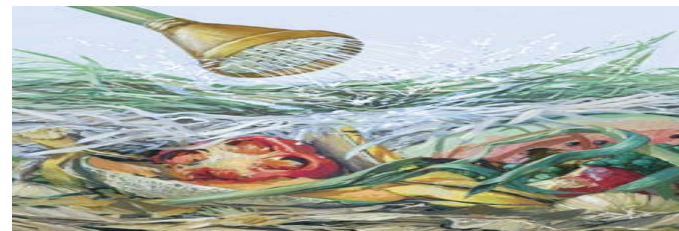


How Do I Build a Compost Pile?

- Starting a compost pile is like firing up the grill – air has to be able to circulate through the compost pile to keep the heat going – stack stones, branches, wooden slats, PVC pipes at the bottom of the pile
- Alternate layers of brown and green materials – the brown layer should be ~twice as thick as the green layer
- Use a ‘fire starter’ – a little (good) topsoil, compost, manures – introduce the microbes that will work on your compost pile between the layers
- Add a few small twigs, acorns, egg shells and/or pine cones between each layer. This will help keep the pile aerated
- Wet each layer – the layer should appear to glisten. You can also feel the layer – it will feel like a wrung out sponge

Tip: consider mixing your materials outside the composter first, then put them in the composter:

- A layer of the same materials can sometimes become stiff and hard to move and/or water
- Depending on your height, strength, etc – mixing materials once they get in the composter can be difficult



How Do I Build a Compost Pile?

- Layer kitchen scraps low in the pile or bury them deep to keep animals from foraging
- Check on the pile periodically – after ~2-3 days the center of the pile will feel warm to the touch (temperatures inside the pile can go over 100 degrees.) The pile will also begin to shrink
- Make sure the pile stays moist; turn it occasionally as well
- Over time you will notice fine brown or black soil-like particles at the bottom of the pile – that is your completed compost
- You can also speed up the process by using the three bin method – as one bin fills, move the contents to the next bin



Hot Composting

- If you want to make compost in a hurry, stockpile your materials, build your pile, then check on the temperature frequently – use a thermometer.
- Get the temperature up to at least 90 and as much as 130 degrees, but don't let the temp go above 150 degrees – that will kill the beneficial microbes
- The pile will shrink rapidly – turn the pile as needed to get the temperature back up
- Over time – anywhere from 2 – 6 weeks depending on the materials, and your turning ratio, the pile will shrink by as much as two-thirds and will no longer heat up
- Let the pile cool (aka cure) before adding it to your garden





Type of Composters

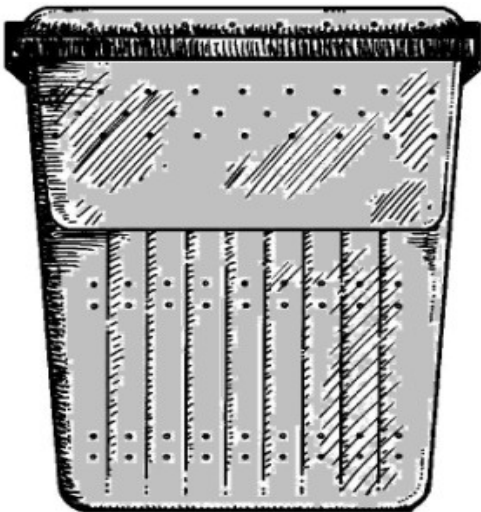
(you can just have a pile, too!)



Vermicomposter



Digester – for feces, meat, dairy



Troubleshooting



- My compost smells – you may have too much green materials or your pile may be too wet. Add more browns, take the cover off the pile to dry it out
- I don't have a faucet nearby – take the top off the composter if you know it's going to rain/snow; create a hollow on the top of an open pile to collect water
 - Some folks cover their compost pile with a mesh-like cloth that lets water through
- It's winter – can I still compost? Yes, consider saving up scraps for warm days – bury them in the pile
- My compost doesn't seem to be doing anything – your pile may not have enough water, the outdoor temperature may be too low (below 40 degrees) or the pile may be too small (remember 3'Lx3'Wx3'H). Add water and consider moving your pile to a sunny or sunnier area. Check the bottom of the pile – the compost may be done!
- How can I quicken the composting process – shred materials with a lawn mower, whisk items in a blender, soak items overnight, chop items up
 - Some folks roast fruit pits and seeds – you can smash them as well – then blend them
 - Consider getting a separate 'compost' blender, if you're mixing garden waste with food items
- I don't want a compost scrap container on my kitchen counter – consider keeping scraps in the freezer
- My neighbor's cat keeps hanging out on top of my compost pile – that's good: it means your compost pile is hot!

Troubleshooting



- I don't have enough greens – consider stockpiling browns until you get more of the greens. You can also layer in some topsoil between the brown layers. If you have too many greens (ex. Grass clippings) consider using them as a thin mulch in your garden bed or spreading them over your lawn
 - Consider talking to other folks who compost – example, a school compost pile may have lots of greens from the cafeteria, they might welcome your browns
- How can I get more air to my compost –some folks take a PVC pipe, drill holes in it and stick it in the composter before adding materials, others will stick rebar, old rake handles, etc., in/out of the pile to get air in
- Should I buy compost activators – No, use soil or compost instead. You can also add leaf mold or manures
 - Something to try from MG Carole Miller, Topmost Herb Farm – the herb comfrey in small amounts
- Can't I just buy compost – yes, but do your homework. Consider mixing different types to ensure a 'balanced diet'
 - Tip: if you get compost from your town, consider getting or making a sieve to sort out bits of plastic, papers, etc.
- I don't want to build a composter, but buying one is expensive – check your town, environmental groups, government agencies, community fairs, etc.
 - Ex. SCRRRA - Southeastern Connecticut Regional Resources Recovery Authority sells composters at cost (\$45) scrrra.org

What Can I Do Instead - Leaf Mold

We all know someone who says “I tried composting leaves – I made a big pile in the back yard and it never did anything!”

Passive Methods – approximately 6 months to a year:

- Method 1: Pile your leaves in a corner of the yard or into a wood or wire bin. The pile or bin should be at least three feet wide and tall. Dampen the entire pile. Let it sit, checking the moisture level occasionally, add water if necessary.
- Method 2: Take a large black plastic garbage bag. Fill the bag with leaves - moisten them. Seal the bag, then cut some holes or slits in the bag for air flow. Let it sit. Check the bag every month or two for moisture - add water if the leaves are dry.

Semi-Active Method – approximately 2 to 4 months:

- Before adding leaves to your pile or bag, run over them a couple of times with your lawn mower to speed up decomposition. Use a shovel or garden fork to turn your leaf pile every few weeks. If you are using the plastic bag method, turn it over or give it a firm shake every few weeks. Both introduce air into the process, speeding up decomposition. If the leaves are in a plastic composter, turn the pile every few weeks, as well.
 - Tip: If you are using the pile or bin method, try cover your pile with a plastic tarp. This will keep the leaves more consistently moist and warm

Active Method – approximately 2 to 3 weeks:

1. Shred your leaves. (I don't have a lawn mower, so I put them in leaf bags and stomp them)
2. Add greens - nitrogen to the pile. Layer the greens in. (I use horse manure)
3. Turn the pile every three days for 2-3 weeks.

What Else Can I Do Instead - Vermicomposting

The 'Cast (and Castings) of Thousands'

Requirements:

- Red Wigglers (*Eisenia foetida*) or Red Earthworms (*Lumbricus rubellus*)-approximately 1 lb.
- Enclosed bin (plastic or untreated wood is preferred), with ¼" holes in the bottom for drainage and air flow
- Fruits and vegetables, pieces, as well as parings and rinds
 - Coffee grounds, filters, tea bags
 - Grains (bread, crackers, cereal)
 - Rinsed eggshells
- Shredded newspaper



Benefits:

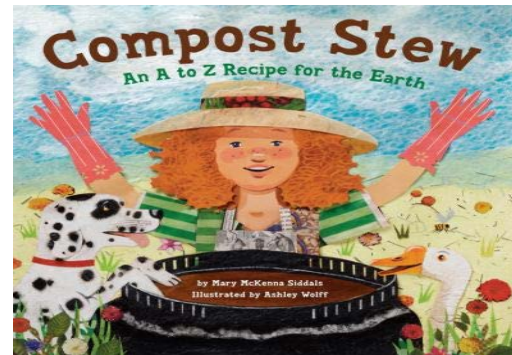
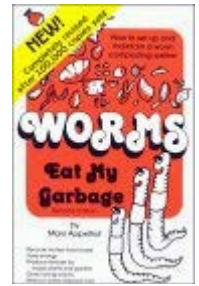
- Year-round, indoors
- Simple, inexpensive
- Environmentally-sound practice
- Organic fertilizer
- Mucous from worm castings aids soil in retaining nutrients



Additional Resources

Your CT Libraries – try before you buy, examples:

- Compost Stew by Mary McKenna Siddal (Waterford Public Library)
 - Kid books are great – short, to the point *and* there are pictures!
- Worms Eat My Garbage by Mary Appelhof (Preston Public Library)
- The Compost Specialist by David Squire (Groton Public Library)
- The Rodale Book of Composting (Bill Memorial Library, Ledyard)
 - Text book for the UConn Master Composter Program



2015 UConn Master Composter Program begins October 6 at the Middlesex County Extension Center – check <http://www.ladybug.uconn.edu/documents/BrochureFall15.pdf> for information.