Composting

What is compost?

Decomposed organic material

What can compost do for my garden?

- Provide steady, slow-release of nutrients
- Increase organic matter in the soil
- Improve drainage and air pore space in heavy clay soils
- Improve nutrient and moisture retention in sandy soils
- Introduce important microorganisms into the soil
- Provide a good surface mulch

How can I make my own compost?
What do I need?

- Space
- Organic matter
  - Green/moist plant materials
    - **Nitrogen** for microorganism proteins
  - Brown/dry plant materials
    - **Carbon** for microorganism energy
  - Animal manures
- Air
- Water
- Time

Space

- Minimum 3’x3’
- Maximum 5’x5’ per pile
  - Soil contact important
  - Room to work alongside the pile
- Level, with good drainage, no standing water
- Close to water source
- Part sun to light shade
- Convenient for you
- Not too windy

Space

- More than one pile is best
  - 1 Still adding new materials
  - 2 No new materials: composting in process
  - 3 Done: curing/resting and using
- Out of public view
- Not against wooden fences, walls or trees
- Not under drippy eaves or downspouts

Organic matter

<u>Dry/brown/carbon</u>

- Sawdust, ground or finely chipped wood products
- Autumn leaves
- Shredded paper products
- Other dried plant material

Organic matter

<u>Fresh/green/nitrogen</u>

- Grass clippings, garden waste, fruit and vegetable scraps, coffee grounds
- Manures, in moderation
  - Poultry
  - Rabbit
  - Steer/dairy
    - Salts
  - Horse
    - Weed seeds
- Check for herbicides

Do not add

- Meat or fish scraps
- Dairy products
- Dog or cat waste
- Oils or fats
- Infested or diseased plant materials
- Egg shells, in large quantities
- Wood or charcoal ashes
  - Calcium and salts that are not appropriate for Utah soils
- Large amounts of materials from Black walnut trees

How much green and brown?

- Successful composting requires about 30 parts carbon to 1 part nitrogen
- All brown materials have at least some nitrogen
- All green materials have at least some carbon
- A mix of **two** parts brown/dry to **one** part green/fresh will usually give a compost pile the right mix of carbon to nitrogen

Begin a new pile by making even layers with your materials

About 6-8 inches organic materials, larger pieces to the bottom of the layer

Don’t worry if you don’t have enough organic matter right away

About 1-2 inches manure, if desired

About 1-2 inches garden soil

Lightly water each layer as it is added, if needed

- You can leave the layers, adding to them over time, but mixing your layers together will speed up the composting process
- When you mix in additional organic material, add a shovelful of soil or finished compost
- Stop adding new material just before your pile becomes too large to manage

Air

- Microorganisms need air
- You have to make it happen
  - Air holes, etc.
  - Aerating/turning/tumbling every 1-4 weeks
    - Spading fork, hooks, aerators
  - The right mix of wet and dry

Water

- In Utah, you have to make it happen
- Just enough, but not too much
  - Moist like a wrung-out sponge
  - Not soggy
- Turn/aerate after watering
- Check frequently in July and August

Hose, bucket, watering can, sprinkler, or controlled sprinkler

3 stages

- Building, adding to the pile
- No longer adding but stirring and tending the pile while it composts
- Compost is finished- ready to screen, store or use

Is it working?

- Active compost piles will get hot
- May be steamy during cool or cold weather
- Active compost piles will get smaller
- Active compost piles won’t smell bad
- Composting will stop during the winter and resume in the spring
  - May also get too soggy during wet winters

Something is wrong!

- My compost smells terrible!
  - Compost too wet-stir more frequently
  - Too much green- not enough brown
- Nothing is happening!
  - Too dry?
  - Not enough green?
- There are bugs in my compost!
  - Usually not a problem

Is it done yet?

- Finished compost is dark brown, crumbly and has an “earthy” odor
- When compost is finished, you can’t identify the materials that you put into the pile
- Finished compost no longer gets hot

Screen/sift it

Anything that doesn’t fit through screen goes back into active compost pile

Using compost

- Up to 4” into the top 8” of soil if compost hasn’t been added before
- 1-2” per year after that
  - Over the top
    - Thank you, earthworms!
  - Mixed or tilled into soil
- Combined with potting soil for container gardens
  - 10%-20% compost to potting soil

Using compost

- 1/4”-1/2” of finely screened compost over newly aerated lawns
  - Sweep or gently rake the lawn afterwards
- 1”-1½ “ layer as mulch in flowerbeds and vegetable gardens

Tips for success

- 3’x3’x3’ is the minimum size
- Chop, shred or grind materials before adding to the pile (for best results)
  - Mower, shredder, shovel, etc.
- Throw in a shovelful of soil or compost
- Mix in additional ingredients after the first layering
- Aerate, aerate aerate
  - Once or twice a week if you want faster compost
- Don’t let the pile dry out

Questions?

meredith.seaver@usu.edu – for questions about this presentation

gardenhelp@usu.edu – for general yard, garden, pest and home orchard questions