



Compost!

Presented by:
Amy Kay
Clean Water Manager
The City of Davenport

Information Provided by:
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DAVENPORT PUBLIC WORKS NATURAL RESOURCES



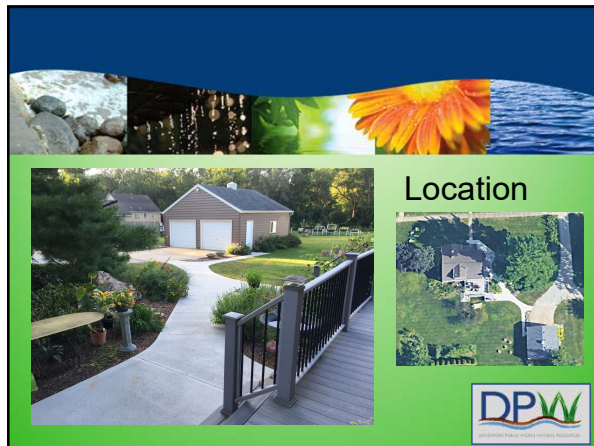
Compost Considerations

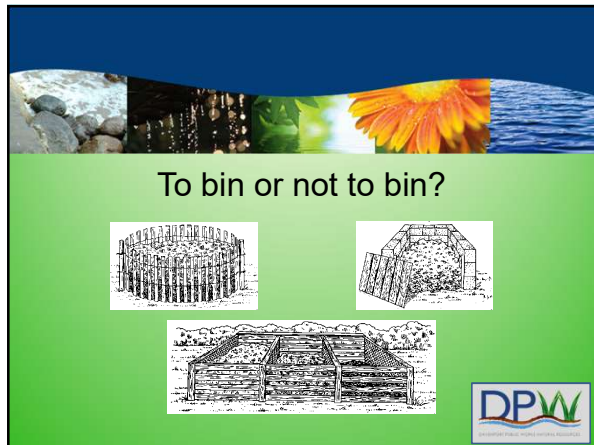




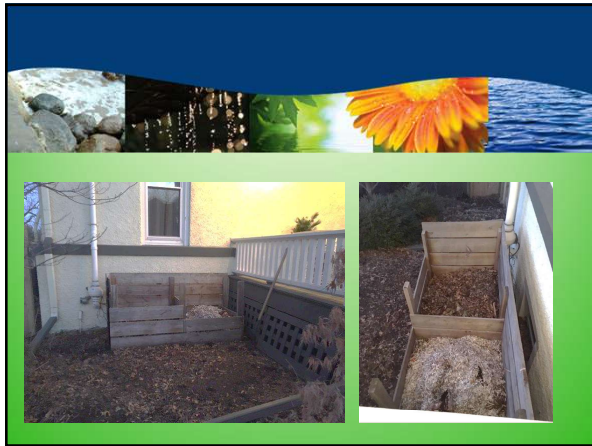
Location

















Food Group I

Browns - materials with a lot of carbon

Leaves (30-80:1)

Straw (40-100:1)

Paper (150-200:1)

Sawdust (100-500:1)

Animal bedding mixed with manure (30-80:1)





Food Group II

Greens – materials with a lot of nitrogen.

Vegetable & Fruit (12-20:1)

Coffee grounds (20:1)

Grass clippings (12-25:1)

Horse Manure (25:1)

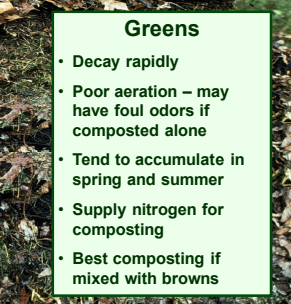
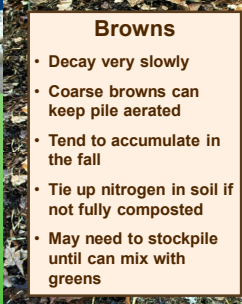


Browns

- Decay very slowly
- Coarse browns can keep pile aerated
- Tend to accumulate in the fall
- Tie up nitrogen in soil if not fully composted
- May need to stockpile until can mix with greens

Greens

- Decay rapidly
- Poor aeration – may have foul odors if composted alone
- Tend to accumulate in spring and summer
- Supply nitrogen for composting
- Best composting if mixed with browns





Where do de-composers come from?

If you build it, they will come...

Leaves / wood chips/ food scraps
grass clippings.

A little horse manure, and
finished compost / Soil.

Each of these add microorganisms
to the compost pile.





Is shredding necessary?



Smaller particles
decompose faster

Have greater surface area
per unit volume.

Allows microbes to get at
more of the food.





Managing the compost process

- The most rapid composting is achieved by
 - Adding mixed browns + greens
 - Regularly turning (mixing) the compost pile
 - Controlling water content
- When pile no longer heats after mixing, allow it to cure (stand without mixing) for at least 4 weeks before using the compost





Are You Going to Be Lazy or Active?

Good compost can be made in a pile that never gets hot, but...

- ❑ Lazy or the Dump & Run -
 - Slower - it takes longer to make compost
 - "Cold" Process – weed seeds and disease may survive
- ❑ Active -
 - Faster - The most rapid composting
 - Hot - Ensures weed seeds & diseases are destroyed





Composting & Compost is like a baby's diaper.

If it smells...
Something needs to be changed.





Compost Pile Troubles

❑ It Stinks	❑ Not Composting
■ Not enough air	■ Too much air
■ Too many greens	■ Too many browns
■ Too wet	■ Too dry





When is compost finished?





Looks

- Dark and crumbly
- Materials are unrecognizable
- Not soggy and wet
- Finished compost sinks to the bottom of your pile because it becomes heavier than starting ingredients
- Particle size-can be screened





Smells

- Like "good earth"





Compost Tea



Make the most of a little bit of compost by brewing compost tea. It's one of the best natural soil amendments, chock full of microbes that promote a healthy soil ecosystem.

Replaces chemicals * Helps suppress diseases
Increases plant growth





Steeped Compost Tea



1. Fill a clean 5 gallon bucket with water. If possible, use rainwater collected in a rain barrel. If using chlorinated water, set filled bucket outside in sunny location for a short while to for chlorine removal.
2. Make a tea bag by filling mesh type material with 4 to 6 cups of compost. Materials that work well are old nylons, burlap, cheese cloth or small mesh laundry bags. Suspend homemade tea bag in water.
3. Let tea bag steep for 24 hours. To derive the most benefit, apply tea within 4 hours after steep is complete.





Using Compost Tea



Full strength compost tea is safe, however to further its use, tea can be diluted with chlorine free water at a 1:5 to 1:15 ratio (1 gallon of water to 5 – 15 gallons of tea).

Soil Drench: For a healthy lawn follow up aeration with a tea application.

Foliar Spray: For best results, at least 75% of upper and lower leaf surface should be covered during each application.





Simple tests for finished compost

Bag test: sealing compost in a plastic bag for several days should produce no foul odor



Germination test: will seeds germinate in the compost? (good test to use if compost will be part of a potting mix)





Testing Your Compost

Woods End Research Lab's Solvita Soil & Compost Maturity Test Kit
www.woodsend.org





Can't make your own compost?

Visit the City Compost Facility at
2707 Railroad Avenue!

They also have compost spreader rental and other available products.

Find the compost calculator and fees at
www.cityofdavenportiowa.com/compost



Compost Quiz

Q: Can I compost newspaper?

A: Yes, lay a couple sheets out on the counter and peel vegetables or fruits onto the paper – wrap everything up and add to your compost pile; or if you're lacking a little "brown" shred it up and add to your compost pile.





Compost Quiz

Q. Can I compost pet waste?

A: Do not compost dog or cat poop (it may contain parasites or disease organisms harmful to humans). You can safely compost waste from guinea pigs, rabbits, hamsters or gerbils.





Compost Quiz

Q: Can I compost in winter?

A: Yes. Most likely your bin will go dormant if internal temperatures drop below 50°F. But if you continue to add to it, the decomposition process will increase again in Spring.





Compost Quiz

Q: Do I have to cover my compost pile?

A: Yes – it is recommended. Covering your pile keeps heat and moisture in and prevents leaching.





Compost Quiz

Q: Do I have to turn my compost pile?

A: Not necessarily – but, turning:

- Speeds up the composting process
- Re-heats pile to keep it in aerobic state
- Creates new passageways for air & moisture
- Eliminates odors & matting





Compost Quiz

Q: I'm overwhelmed with too many leaves, what should I do?

A: Two things you can do here:

1. Shred and store and use throughout the winter to cover food scraps (mixing browns & greens)
2. Shred and mulch your planting beds with them. Pick up the "leaf mold" in the spring to add to your compost pile or let it be and cover with a wood mulch in spring if you prefer.





Compost Quiz

Q: I'm overwhelmed with too many greens and grass clippings, what should I do?

A: Two things you can do:

1. Mulch mowing, so you don't have grass clippings
2. Replace your high maintenance with native turf or native prairie planting that does not need mowing.





Questions?





Amy Kay
(563) 327-5160
akay@ci.davenport.ia.us

Thank You!

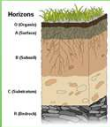
To learn more about this, and other
Rainscaping Iowa practices that improve and
protect water quality visit:
www.IowaStormwater.Org
or the
Natural Resources webpage
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Restore Soil Quality

- New or Existing lawns
- Reduce compaction, provide organic matter.
- Result: requires less watering, reduces compaction, reduces fertilization needs, saves money over time





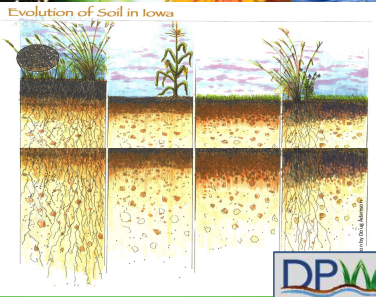
Evolution of Soil in Iowa

Pore Space
Native prairie soils have 50%

Root Architecture
Native vegetation has a strong root architecture that builds soil quality

Less Topsoil
= more runoff sooner leading to flashier hydrology
= runoff quality degradation and increased flooding

Less Organic Matter (OM)
The 2-4% organic matter (OM) content of most of Iowa's agricultural and subdivision soils is a 60-80% reduction from native soils.





Soil Quality

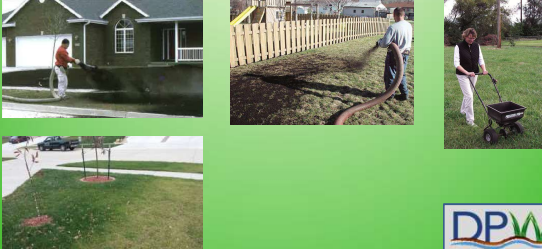
- 0.6" of rain absorbed per % of OM.
- With 10% OM ~6" of rain could have been absorbed on the prairie without shedding runoff
- Today, soils typically have 2-4% organic matter content (less where topsoil has been stripped and exported off-site).
- Many modern soils will shed runoff after 1.5 inches of rain





aerate....apply ¼" - ½" compost with blower, spreader or rake...then seed







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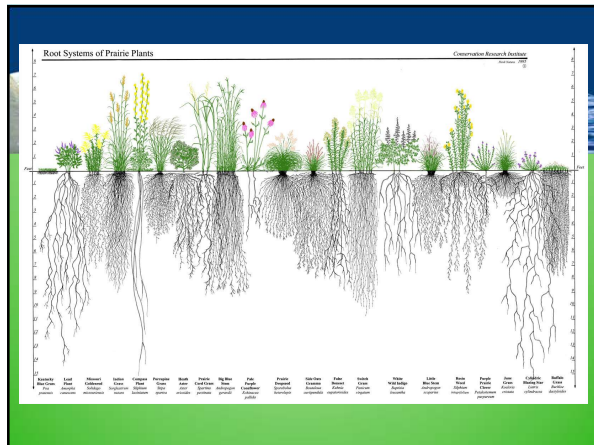


Native Plants

- Can be used like cultivars in landscaping
- Flowers (forbs) and grasses
- Plants for sun and shade
- Available from seed, plugs or potted plants
- Deeper root systems require less watering

prairienursery.com ionxchange.com
blue-thumb.org – Plant Selector







Native Turf Grasses

Blue Grama, Sideoats Grama, Buffalo Grass

