

Composting 101



Hosted by: Township of Terrace Bay

Workshop Agenda

- Theories in Composting
- How to Compost
 - Location, materials, etc
- Other Ways to Compost
- Local Stories of Composting
- Other Ways to Compost
- Information Sources



What is Composting?

- Composting is the natural breakdown of organic materials. Compost, is the rich organic soil that is made as micro organisms decompose yard and kitchen wastes.
- Compost is produced through the activity of aerobic (oxygen-requiring) microorganisms. These microbes require oxygen, moisture and food in order to grow and multiply.

Did You Know?

- Compostable materials and yard waste make up approximately one third of the garbage a family normally throws out
 - Source: Environment Canada
- Recyclables make up another 40-50%
 - Source: Waste Diversion Ontario
- Toronto has an 80% diversion goal ... 80%!!!
 - Source: Municipal World 2009

Factors Affect Composting

- Ratio of carbon to nitrogen (4:1)
- Aeration of the pile
- Moisture content
- Temperature
- Time



* Remember Acronym RAM TT *

Ratio of Carbon to Nitrogen

- One of the most essential factors for composting is to have a good ratio of carbon based materials to Nitrogen based materials
- Materials will be discussed later, but an excellent source of carbon based materials are dry leaves and dry, brown grass



Aeration of the Pile

- To promote the growth of the Microorganisms, the compost pile should be turned or aerated on a regular basis with a stick, pitch fork, or compost turner
- This can initially be done weekly when just starting your pile or in the Spring and then bi-weekly from then on.



Moisture Content

- To promote the composting process, it is also important to keep your compost pile moist (not too wet, but damp)
- This can be done in unison with a rain barrel and watering can when you turn the pile or on a weekly basis as needed



Temperature

- To promote the breakdown of materials and growth of micro organisms, the pile should be placed in direct sunlight as much as possible
- The hotter it is, the quicker things break down and the better it is for the micro organisms



Time

- How optimum the above factors are for your compost pile will determine how quickly materials break down
- In our climate, you can generally expect a pile to take a year to fully break down in to compost



Enough Theory Already!

- Before we get into some practical discussion on composting for our region
- Any questions?



Let's Get Composting!!!

- Now let's get into the essentials of how to setup a backyard composting operation in your backyard
- Remember, composting is an art and not a science so class participation is encouraged!



Composter Location

- Find a small piece of land on your property (not the Townships please) that receives excellent sunlight and is close to your door
- The soil in this area should already be relatively good, and there should be nothing, like trees or rocks, that would cause you to have to move your composter later



Purchase/Build a Composter

- The size of your area will dictate as well as budget and time available



- Home Hardware has tonnes of selection or else a homemade one can be constructed

Other Composting Tools

- Under kitchen sink bucket
- Compost turner ... or else stick or shovel
- Accelerant



Position the Composter

- Dig up the area if it is to be mounted on the ground to allow micro organisms to come up
- Ensure it has as much sun exposure as possible and is mounted securely to the ground
- Add brown stuff, some accelerant and good black earth to start the pile



Collecting Waste

- Position a small bin under your sink in your kitchen to collect materials
- Ensure you take your time collecting materials and cut it as fine as possible using a sharp knife or something like a slap chop



Green Materials to Collect

- Fruit & peels
 - Vegetables
 - Tea bags/leafs
 - Yard waste
 - Egg shells
 - Hair
 - House plants
 - A little grass
- Ensure you do not overload the composter with some waste types like egg shells, citric fruits, and grass

Brown Materials to Collect

- Bread/grains
- Rice
- Pasta
- Cardboard ^{shred} ↙
- Newspaper
- Coffee grinds
- Coffee filters
- Nuts & shells
- Dry leaves & brown grass
- Wood pellet sawdust
- Save the grass and leaves after your first spring cleanup rake

Materials NOT to Compost

- Meat
- Fish
- Bones
- Cheese
- Sweet fruits
- Fat
- Oils
- Chemicals
- Sauces
- Office paper
- Weeds (seeds)
- Rotting food
- Animal waste
- Wood ash
- Limit use of acidic fruits like lemons



These materials can attract pests, create foul odors, or contaminate the compost!

Extra Points on Materials

- Remember the 4:1 ratio of brown to green
- Stay away from sweet fruits (melons, berries, etc) and meat/fish for fear of bears
- Always cut materials as fine as possible to speed up the composting process
- Empty your bucket or bin under your sink every 1-2 weeks

Adding Materials to Your Pile

- Stir your pile and aerate well
- Add brown materials and stir
- Add green materials and stir again
- Most important – LAYER materials
 - Add more brown materials and dirt to cover pile which limits smells from coming up (think landfill)
- Lastly, ensure lid is on tight!

Steps similar for other
composter types

Maintaining the Compost Pile

- Add materials every couple of weeks and ensure each time you aerate well and moisten
- Check your composter for 'bad smells'
- If you are worried about a batch of materials going in, you can skip layering for a week and dig and bury the green materials and aerating the pile and cover with brown

How long does it take?

- In our climate, generally it takes about a year for good compost in a standard composter
- A good practice is to have two composters on the go, one full of materials composting and one being filled.



- * 2009 Green Tradeshow Materials, done in a year!

Good vs Bad Compost

Finished Compost Qualities:

- Smells earthy
- Will not reheat when turned or wetted
- Looks like dark soil, original trimmings are not identifiable



Immature Compost Qualities:

- Smells sour or like ammonia
- Significant heat is generated when compost is turned
- Is light colored; leaves, clumps of grass, or other trimmings are identifiable

Using your Compost

Three most common uses for finished compost are:

- **Mulch:** spread 1-3 inches around plants and bare soil to prevent erosion, control weed growth, and conserve water.
- **Soil Amendment:** work 2-3 inches of compost into the top six inches of soil each time you start a new garden or plant trees or shrubs.
- **Potting Mix:** sift compost through a ¼ inch screen and mix five parts commercial potting soil with one part compost.

Bears!!!

- Try to situate your composter away from bear areas
- Do not add foods bears would want to eat!
- Add hair or baking soda
- Do not lost hope if a bear gets into your composter – sometimes just bad luck



Composting in Winter

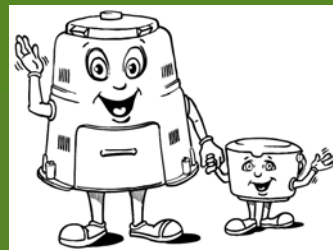
- Less fear of bears and bad smells
- A great deal slower compost process
- Continue adding materials
- Can't really aerate, but can add green materials and then brown to cover
- In Spring, ensure you aerate as soon as possible and layer against bears!

Grass Recycling

- Grass clippings are situation specific
 - High in nitrogen = high chance of odours!
- Keep your lawn a healthy length and cut once a week – not too short, not too long
- Dandelions? Treat or pull for this to work
- Leave the clippings on your lawn as mulch
- Or build a grass pile for next years brown

Other keys to success

- Add worms regularly
 - do not get too attached ☹
- Get a composting buddy
- Build a composting network
- Get kids involved



Other Info Sources

- Composting Council of Canada
www.compost.org
- EcoSuperior - www.ecosuperior.org
- Serg Co-op Inc - www.serg.ca
- Each other!

