Outline

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INS and OUTS of COMPOSTING

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Composting Facts

Don't Panic! It's Organic!

- Composting is natures way of recycling.
- It's easy and inexpensive with a big benefit.
- Reduce waste by 30%, better for the Environment.
  (Fewer garbage bags to buy, fewer trucks on the road, less methane gas at the landfill and you recycle nutrients back into the earth).
- If every household composted, you could reduce the cost to collect and dispose of your waste up to 30%.
- Improve your landscape/garden, by increasing nutrients and retains moisture.
- One application of compost can have a positive effect on plant growth up to 8 years.

Composting Overview

Definition – is the breakdown of organic material into a soil amendment – "humus"

The Recipe

- Select your cookware – pick the bin and method.
- Prepare your area – Pick a sunny convenient location.
- Gather ingredients – Carbon (browns) and Nitrogen (greens).
- Measure ingredients – 2 carbon units to 1 nitrogen unit.
- Add ingredients in layers – add nitrogen and cover with carbon.
- Let stand until more ingredients are gathered.

The Recipe … continued

Before adding more ingredients

- Mix current ingredients – turn your compost to add air.
- Check moisture content – should be wet as a damp sponge.
- Check temperature – should be warm, and not stinky.
- Add ingredients often, but mix your compost beforehand.

Different Types of Composters

This composter is made of durable plastic that will not break down or deteriorate. Slats in the sides provide air for good decomposition.

A small composter for those with a small amount of area. Place the material in the top, shovel finished compost out of the bottom.

With this type of composter you start the material in the first bin, then pitch it into the second bin to turn it.

A type of barrel composter with two sections, and a hand crank to make turning easier. Also available with motor to automatically turn it for you. This type makes finished compost quickly.

What to add

- Compost anything that was once growing in the ground
- Fresh grass clippings
- House plants and old potting soil
- Dry leaves and plant trimmings
- Straw and hay
- Weed (only if weed are green and seeds have not matured
- Wood Ash (excellent source of potassium – in thin layers
- Pine cones and needles
- Shredded newspaper (black and white) and cardboard
- Dryer lint and hair
- Crushed egg shells
- Kitchen waste – fruit and vegetable materials, tea bags, coffee grinds
- Stale bread and cereal

What NOT to add

- Meat/bone/fish
- Fatty foods – cheese, salad dressing, butter and cooking oil
- Dairy products
- Metals/Plastics
- Barbecue ashes or coals
- Rhubarb leaves
- Pet waste, Kitty litter
- Pine or cedar sawdust
- Colored paper
- Herbicide/pesticide treated plant materials

Compost Goodies

- Alfalfa – nitrogen, calcium, magnesium, phosphorus, zinc
- Chickweed – potassium, iron, copper, phosphorus
- Clovers – nitrogen, potassium
- Dandelion – sodium, potassium, magnesium, calcium, iron, copper, silicon, phosphorus
- Garlic – phosphorus, sulphur
- Nettles – sodium, potassium, calcium, iron, copper, sulpher
- Parsley – potassium, magnesium, calcium, iron
- Sorrel – sodium, calcium, phosphorus
- Thistles – potassium, iron

How will I know my compost is ready?

Characteristics

- Dark in colour
- Crumbly
- Earthy smell

<u>Plastic bag test</u>: Fill a zip-lock bag with your compost Squeeze the air out of the bag and seal. Let the bag sit for 24 hours. If there is air in the bag or it smells awful then the compost is still active and should not be use.

Trouble Shooting

Odours

- Rotten Egg Smell – usually results from too much water or too much compaction. Get rid of by adding dry browns; turning the pile; and covering kitchen scraps.
- Ammonia Smell – too much nitrogen (greens). The extra nitrogen is turned into ammonia. You might notice when you put in a bunch of grass clippings. Reduce problem by adding more browns and turning the pile.
- Low pile temperature – pile is too small, too dry, need more ozygen, not, not enough nitrogen. Make the pile bigger, add water, turn pile, add greens.

Flies

- Food scraps are not covered.

Winter Composting

It’s not a myth, it does happen!

Just slower!

Don’t get discouraged!

Like many things, it just doesn’t like the COLD

Preparing for Winter

- Start with an empty bin. Because the process is slower, emptying your bin will give you lots of room for your kitchen organics.
- Move your bin. Relocate your bin to an area closer to your house for the winter. Lets face it… nobody is going to crawl through snow banks to empty a bucket of kitchen waste!
- Keep a “Pre-compost “bucket. Reduce the amount of trips you make to the composter in the winter, keep a small bucket/container in the garage or by the back door. When the pre-compost bucket is full, empty it into your compost bin and continue with layering.

- Stockpile your brown (carbon) material. Gather as much carbon material (i.e. leaves) as possible, keep them in a container close to your composter. Continue to follow your recipe throughout winter.
- Insulate your bin. You can wrap your bin in a tarp/cardboard. Keeping the warmth in. Or removing the cover and placing a thick piece of glass over top during sunny days.

What to do during winter?

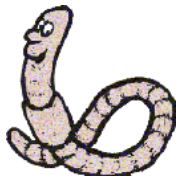
- Continue to add material, layering your carbon (browns) and your nitrogen (greens) materials
- Do not mix. Mixing allows any heat that has been produced to escape. In order for composting to be effective you need the heat. Heat is generated by the microbes in action. This heat is needed to increase the number of microbes. Its is a circle that should not be broken.
- Do not add water. Water only brings the temperature down and causes freezing. You should get enough water from the green material you add.

Winter Composting Tips

- Larger active piles hold the heat longer, keeping the decaying process active during the winter.
- Smaller pieces. The smaller the size of the material you put into your compost will also help the breakdown process. Simply mulch your leaves, cut up your fruit and vegetable waste into smaller pieces.
- The freezing and thawing cycle is good for the compost material, it helps break down the fibers allowing for faster decomposition in the spring.

FUN:

- Be creative! Don't be scared of composting, it is a natural process, so try new things and ideas!
- Don't be in a hurry, everyone wants compost in 6 months. Relax, don't worry about it! If you want some, and it looks like it isn't finished you can always screen it.
- Get the family involved! It's educational and a great outdoor activity. Plus, the kids will love to watch the worms and critters at work!



Summary

Composting is a simple, yet effective way to reduce your household waste going to the landfill. While the process might appear to be complex, some common sense and attention to a few simple principles will result in an excellent product to enhance your garden and an environmental benefit to your community.

Give it a try!

Introduction to Vermicomposting

Vermicomposting (Worm Composting) - is a clean odourless way to turn your food waste into rich fertilizer.

What do you need?

- A Container
  - A dark bin made of plastic or wood
  - Air holes on the top
  - 12 - 18 inches deep (30 – 45 cm)
- Red Wriggler Worms
  - Smaller than Earthworms
  - 1 lb of worms eat ½ lb of food a day

- Bedding Material
  - Peat moss, shredded newspaper, potting soil
- Fruit and Vegetable Scraps

My bin is ready, now what?

- Collect vegetable/fruit waste, coffee grounds, tea bags, bread, dried and crushed eggshells
- Bury the food in the bedding
- Monitor the moisture
- After three months harvest the worms and start over.
- Use your vermicompost on indoor and outdoor plants.

Good to Know

# of People	Worms	Bin size
1 or 2	1 lb	1 ft x 1.5 ft x 2 ft
2 or 3	2 lbs	1 ft x 2 ft x 2 ft
4 to 6	3 to 4 lbs	1 ft x 2 ft x 3.5 ft

Red Wigglers Facts

- Prefer warm temperatures 13 – 25 °C
- Are very sensitive to light
- 1 lb of worms equals about 1000 worms
- 1 lb of worms will eat ½ pound of food per day

How can I use compost?

- **TOPDRESSING**
  For best results, aerate the entire area before topdressing using a commercially available aerator. For topdressing, spread 1/3 to 1 1/4 cm (1/8” to 1/2”) of mature compost evenly over the area using a rake. Water thoroughly.

- **FLOWER BEDS**
  For existing beds, add about 2 1/2 cm (1”) of compost and work it into the soil. Water until the entire root zone is saturated. For new beds, add 2 1/2 to 5 cm (1” - 2”) of compost and mix. Plant and water accordingly.

- **VEGETABLE GARDENS**
  Apply about 2 1/2 cm (1”) of compost and incorporate into the soil. For poor soils, you may need to apply compost on a yearly basis until the soil has improved to your satisfaction. Do not overapply compost because many vegetables will not produce high yields if excess nitrogen is in the soil. Compost used as a mulch can be turned into the soil prior to replanting.

- **MULCH**
  For mulch applications around annuals, perennials and other landscape plants, a 5 cm (2”) layer of compost is optimum. Apply compost and rake to achieve an even application. Avoid over or under mulching because other problems can arise, such as smothering of root systems. Arrange mulch so water flows away from trunks, reducing chances for crown rot. Finer-textured composts do not suppress weeds as well as coarse-textured composts.

- **LAWN ESTABLISHMENT**
  For lawns that are going to be seeded or sodded, apply about 2 1/2 to 5 cm (1” - 2”) of compost. For seeded lawns, apply seed and then a slight dusting of compost to cover seed. For sod and seeded lawns, thorough irrigation is necessary. Compost helps increase grass seed germination by providing adequate seed to soil contact, moisture and balanced nutrients. A regular fertility program should be established once the lawn is about 8 weeks old or when it has been mowed for the second time.

- **COMPOST TEA**
  Compost tea is a good “perk” for your plants. It’s simple to make and easy to use. Fill a cloth bag with compost and put it in a barrel or bucket of water. Your mixture should be about one part compost to five parts water. Let it steep for about a week, swirling it around a few times and making sure that the “tea bag” is submerged. You can then pour the “tea” over your plants. Put the compost either back into your backyard composter or spread it in the garden.

Additonal Information

Alberta CARE

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Alberta Environment www.gov.ab.ca/env

Composting Council of Canada

www.compost.org

QUESTIONS?