



FSN Teleconference: Composting



**Food Security Network of
Newfoundland and Labrador**
www.foodsecuritynews.com

Agenda

12:00 – 12:05

Welcome & Introductions

12:05 – 12:10

Introduction to FSN & Food Security

12:10 – 12:30

Keynote Speaker:
**Anne Madden: All you Need to Know about
Compost**

12:30 – 1:00

Discussion & Questions

What is Food Security?



Food Security exists when all people, at all times, have access to adequate amounts of nutritious, safe, and culturally appropriate foods.

Food Security means that the people who produce foods are able to earn a living wage.

Food Security Network NL

FSN is a Provincial membership-based non-profit formed in 1998.

- Monthly E-News
- Food Security Initiative Inventory
- Best Practices Toolkits
- Food Security Teleconferences



“Actively promoting comprehensive, community-based solutions to ensure physical and economic access to adequate and healthy food for all.”



Nature: The Great Recycler

**All You Need to Know About
Compost**

Compost leaflets available on webpage:
http://www.mun.ca/botgarden/plant_bio/compost/pdf/index.php

For more information please contact:
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St. John's, Newfoundland, A1C 5S7
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E-mail: bgprograms@mun.ca
Website: <http://www.mun.ca/botgarden>



How it Happens

- Nature recycles organic material through a combination of biological and chemical processes.
- Microorganisms, insects and worms help decompose dead plants and animals, returning nutrients to the earth.
- When we compost at home and work, we are utilizing these processes.



Composting is Easy!

- Simple!
- Inexpensive!
- Convenient!



Benefits of Compost:

- Decreasing the size of our landfills
- A valuable source of minerals
- Retains water better
- Holds nutrients in the soil
- Mixing creates air spaces
- Smothers emerging weeds
- Stretches the growing season
- Adds microorganisms



Building Your Compost Pile

- There are three key ingredients in maintaining a compost.
- These ingredients are:
 1. The right amount of “greens” and “browns”
 2. The right amount of oxygen
 3. The right amount of moisture



Building Your Compost Pile:

1. Browns and Greens

- **Browns** are dry, absorbent and fibrous. They are also rich in the element carbon which is an essential energy source for the decomposing organisms in your pile.
- **Greens** are fresh, moist materials rich in nitrogen. Nitrogen is vital for growth and reproduction of the decomposing organisms. Without it, they cannot break down materials high in carbon.



Building Your Compost Pile:

- **Browns**

- Dry Leaves
- Dry Grass
- Straw
- Wood chips
- Sawdust
- Shredded paper/ egg cartons
- Shredded newspaper

- **Greens**

- Fresh grass clippings
- Plant trimmings
- Fruit / vegetable scraps
- Houseplants
- Tea bags
- Egg shells
- Coffee grounds



Building Your Compost Pile:

2. Oxygen

- The microorganisms that do much of the work in your compost bin are living creatures. Like many living creatures, they require oxygen to survive. This is called aerobic decomposition.
- If not enough oxygen is provided, the process becomes anaerobic. This is much slower and can cause bad odors.



Building Your Compost Pile:

3. Moisture

- The microorganisms that do much of the decomposition work also need water to survive. If your compost pile dries out, the microbes cannot work or survive.
- If a compost is too wet, all the air spaces fill with water, which promotes anaerobic decomposition.



Decomposition Time

- Decomposition time is determined by five factors:
 1. Ratio of “**browns**” and “**greens**”
 2. Amount of **oxygen**
 3. Amount of **nitrogen**
 4. Temperature of compost pile
 5. Particle size of waste



Let's Compost!

Items that **CAN** be composted:

- Kitchen wastes:
 - Fruit peelings and scraps
 - Vegetable peelings and scraps
 - Eggshells
 - Tea bags
 - Coffee grounds
 - Used paper coffee filters
 - Stale bread
 - Cooked pasta (no sauce!)
 - Paper napkins, paper towels



Let's Compost!

Items that **CAN** be composted

- Household Items:
 - Houseplant trimmings
 - Pet fur
 - Dryer lint
 - Hair
 - Shredded newspaper
 - Vacuum bag contents
 - Wood ashes
 - Sawdust and wood shavings



Let's Compost!

Items that **CAN** be composted

- Yard Wastes
 - Lawn clippings
 - Leaves
 - Plant debris
 - Old potting soil



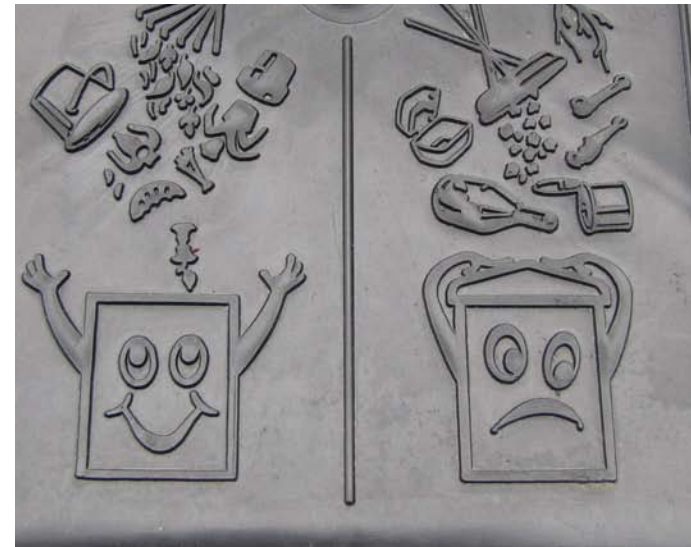
If you intend to use your bin in an educational setting, such as a classroom, you should avoid using fruit peelings and scraps and stale bread.



Let's Compost!

Items that **CANNOT** be composted

- While the following items will decompose, they can cause problems such as pests and odors
 - Dairy products
 - Meat, fish, bones
 - Fats
 - Sauces that include any of the above
 - Pet wastes



Let's Compost!

Items that **CANNOT** be composted

- Avoid adding:
 - Large pieces of wood, thick branches or heavy cardboard
 - Invasive weeds roots or flowers such as morning glory or gout weed
 - Plastic, rubber, metals, glass and ceramics will not decompose



Goutweed



The Compost Bin

- When starting a compost project at home or work, the selection of a compost bin is an important decision.
- There are a large variety of bins to choose from, and your choice is up to you.



The Compost Bin:

Location of the Compost

- To extend the compost season as long as possible, it is very important to position your bin in a *sunny, sheltered* spot.
- While a sunny location is important, your bin should also be *accessible and convenient* to use.
- A *well drained area* is also essential. This can be achieved by raising the bin off the ground.



The Compost Bin: Size of the Compost

- The size of your bin should be related to the amount of material you wish to compost.
- A popular compost bin size is about 30' wide by 30' deep by 30' high.
- Smaller bins, the pile does not heat up properly and a bigger pile may be harder for many people to manage.



The Compost Bin

Type of Compost Containers:

- **Converted Garbage Can:** simply puncture holes in the can to create a bin.



The Compost Bin

Type of Compost Containers:

- **Wire-mesh Container:**
You can build a bin by simply tying together 3-4 feet of wire mesh in a circle and secure it to the ground



The Compost Bin

Type of Compost Containers:

- **Wooden Pallet Container:** Position four pallets in an upright position and tie together to form a square.



The Compost Bin

Type of Compost Containers:

- Rotating Barrel: A bin that rotates by turning a handle, making aeration and mixing an easy task.



The Compost Bin

Type of Compost Containers:

- Plastic bin: A bin that can be purchased at most garden centers.



Humus: Garden Gold!



- The finished product of the composting process is called humus.
- It should be dark in color, crumbly in texture
- It can take anywhere from just a summer to two years to collect your first batch of compost.
- Compost should not be considered a fertilizer in itself, it could be considered as an additive.



Winter Composting Tips

- Position your bin in a sunny, wind-sheltered spot
- Make sure your bin is accessible in the snow
- In the fall, remove finished compost and dig it into your garden beds
- Save bags of leaves and use them during the winter to layer with the “greens”
- Start a vermicomposter inside your house



Vermicomposting: Composting with Worms

- Worms can turn kitchen waste into a nutrient rich soil conditioner called vermicompost
- Vermicompost is a mixture of worm castings and decomposed organic material
- This is ideal for apartment-dwellers and those who lack space for an outdoor compost bin



Vermicomposting: Container

- The size of the container and the number of worms needed
- A worm bin should be about a foot deep and provide one square foot of surface area per pound of waste

Number of people	Quantity of worms	Bin size
1 to 2	1 lb	1 ft x 1.5 ft x 2 ft
2 to 3	1 lb	1 ft x 2 ft x 2 ft
4 to 6	2- 3 lbs	1 ft x 2 ft x 3.5 ft



Vermicomposting: Container

- Worms like dark, moist environments. Cover your bin with a piece of moistened burlap sacking and a sturdy lid.
- Worms are cold-blooded creatures that require some external heat to stay active.
- If the worms do not like their environment they will migrate from the bin.



Vermicomposting: Container

- Plastic bins are suitable for a small number of worms.
- However, wooden boxes are more absorbent and provide better insulation.



Vermicomposting: Worms

- Red Wigglers are the best worms for vermicomposting. They are much smaller and thinner than earthworms and they don't seem to mind being kept in captivity.



Vermicomposting: Bedding

- Worms will eat everything you put in the bin including their bedding!
- The following materials make an ideal bedding:
 - Shredded newspaper
 - Shredded cardboard
 - Shredded fall leaves
 - Chopped straw
 - Dried grass clippings
 - Peat moss



Add a couple handfuls of sand or soil to provide your worms with grit for their digestive systems



Vermicomposting: Food Waste

- Feed your worms the same kitchen waste that you would add to your outside compost heap.
- Bury wastes and vary the location of each deposit to avoid overloading your bin.
- Finely chopped food will be broken down more quickly than large chunks
- Citrus fruit peels take a long time to break down so add them sparingly



Harvesting Vermicompost



- The compost is ready to be harvested when there's little original bedding left and the food scraps have been converted to brown and earthy-looking worm castings
- Move the finished compost to one side of the bin and place new bedding in the space created. Bury fresh food waste in the new bedding. Your worms will migrate to the new food and fresh bedding



Using Vermicompost



- Sprinkle into a seed row when planting
- When transplanting, add a handful of vermicompost to the hole
- Use as a top-dressing or mulch around the base of plants
- Mix half and half with potting soil for your houseplants



Helpful Tips

- Turn your compost regularly with a pitchfork to keep air circulating
- Keep your pile as moist as a wrung-out sponge
- When aerobic microorganisms have sufficient browns, greens, air and moisture, they give off heat when they are active
- Using compost before it is ready can harm your garden plants by taking away the oxygen and nitrogen needed for their roots

