COMPOSTING

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Master Gardeners and Master Composters

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You cannot fail at composting!
Objectives

EACH STUDENT WILL BE ABLE TO:

• List the benefits of adding compost to soil
• Verbalize the impact of the Carbon:Nitrogen ratio to the composting process
• Define cold vs hot composting
• Describe various methods of composting
• Discuss maintenance of the compost pile
COMPOST Definition:
The biological decomposition of organic matter.

HUMUS Definition:
The end product of composting.
Humus
SOIL TYPES
The Soil Extremes

Sandy

Clay
The Benefits of Composting

Provides Structure to soil resulting in:

- Drought Protection
- Erosion Control
- Ph Buffer
- Disease and Pest Control
- Filters storm runoff
- Addition of minerals to soil
More Benefits of Composting

• Environmental: decrease material in landfills, less methane gas released, less air pollution, decreased Carbon Foot Print,
• Zero Waste Lifestyle
• And, HECK, it’s FUN!

Get the kids involved!
## Carbons and Nitrogens

<table>
<thead>
<tr>
<th>CARBONS (The Browns)</th>
<th>NITROGENS (The Greens)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straw</td>
<td>Fruit</td>
</tr>
<tr>
<td>Brown Leaves</td>
<td>Vegetables</td>
</tr>
<tr>
<td>Sawdust and wood chips</td>
<td>Coffee grounds</td>
</tr>
<tr>
<td>Newspaper</td>
<td>Grass clippings</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Herbivore Manure</td>
</tr>
<tr>
<td>Bark</td>
<td>Tea and tea bags</td>
</tr>
<tr>
<td>Pine Needles</td>
<td>Plants</td>
</tr>
</tbody>
</table>
IDEAL Carbon to Nitrogen Ratio

30 parts Carbon
To
1 Part Nitrogen

30:1
NOT ALL RATIOS ARE CREATED EQUAL

- Mixed Paper Products 200-800:1
- Sawdust 725:1
- Cardboard 600:1
- Straw 50-150:1
- Dry Leaves 40-80:1
- Garden Plants and Weeds 20-35:1
- Coffee Grounds 20:1
- Grass Clippings 10-25:1
C:N Example

Dry Leaves \hspace{1cm} 40:1
Plants and weeds \hspace{1cm} 20:1

Equal parts Dry Leaves and Plants/Weeds will create the ideal 30:1 Ratio
What to Compost?

- Coffee Grounds and Filters
- Tea bags and tea
- Fruits and Vegetables
- Eggshells
- Disease free garden debris
- Fruit rinds and cores
- Shells from shellfish
- Nut Shells
More to Compost

• Corncobs
• Weed foliage
• Hair from humans or pets
• Paper Towels
• Dryer Lint
• Finger and toenails
• Feathers
• Herbivore manure
What NOT to compost!

- Meat or dairy
- Fats
- Bones
- Feces of meat eating animals
- Litter
- Pressure treated wood by products
- Diseased plants
- Anything that isn’t organic
Creatures of the Pile
The Circle of Life
COMPOST HAPPENS
Maintaining Your Compost

Time + Energy + $$ = Your Effort
When in Doubt? Add Organics
Amending Your Soil
Building Soil Structure

Friable soil = crumbly soil structure

Macro pores
Mini pores
Micro pores

The action is in the empty spaces
Dump and Run!

Not This

This
Bury It!
Outdoor Composting
Container Compost

• Earth Machine
• Rotate
Vermiculture
(worm wrangling)
Worms in Action
Worm Tea
You too may wear the badge...
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Maintaining Your Compost

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**Soil Food Web**

- **Green Plants Producers**
- **Plant Roots**
- **Decaying Organic Matter (Detritus)**
- **Protozoa**
- **Fungi**
- **Bacteria**
- **Predatory Nematode**
- **Root-eating Nematode**
- **Earthworm**
- **Arthropod Shredders and Predators**
- **Bird and Mammal Predators**

**Soil Profile**

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