"the stars at night are big & bright"
Ellen Pedisich
Master Gardener & Master Composter
“Texas Commission on Environmental Quality”
Don’t bag it - Compost it!
• Decomposition

• Composting Fundamentals

• Composting Structures

• Building and Maintaining a Compost Pile

• Using Compost
DECOMPOSITION: A NATURAL CYCLE

- Leaves fall from the plants and trees.
- Leaves decompose to form humus.
- Worms mix the humus into the soil.
- Roots absorb nutrients from the soil.
- Nutrients travel up the plant to make new leaves.
2.) Composting Fundamentals

Why compost?
To make Humus!
Composting!! Ages Ago
Albert Howard
Indore method - Layering
J. I. Rodale 1898-1971

Aerobic Mixing - Heaps!
anaerobic decomposition

aerobic decomposition
DECOMPOSITION - A NATURAL CYCLE

(aerobic)

(humus)
Air - Water - Nitrogen - Carbon

Compost should be kept as wet as a damp sponge.
Particle Size Effects on Composting

- 1" in diameter
- 2" in diameter
- 6" in diameter

Temperature (°F) vs. Days of decomposition
FOOD WEB OF THE COMPOST PILE

ENERGY FLOWS IN THE DIRECTION OF THE ARROWS.

1st LEVEL CONSUMERS

GROUND BEETLES (CARABIDS) 5-20 mm
PSEUDOSCORPION 1-2 mm
PREDATORY MITE 3-1 mm
ROVE BEETLES (STAPHYLINE) 10 mm

3rd LEVEL CONSUMERS

ANT (FORMICID) 9-10 mm

SOIL FLAT WORMS (TUBULARIA) 70-150 mm

ROUND WORMS (HEMATOBES) 20-80 mm

MILLIPEDES 20-80 mm

EARTH WORMS 20-150 mm

BEETLE MITES 1 mm

LENGTHS OF ORGANISMS GIVEN IN MILLIMETERS (25 mm = 1 mm)
COMPOST HAPPENS

- Brown (Carbon) Materials: leaves, straw, woody materials
- Green (Nitrogen) Materials: fresh grass, food scraps, manures
- Water
- Oxygen
- Heat
- Macroorganisms: earthworms, insects
- Microorganisms: bacteria, fungi, microbes
3.) Composting Structures

holding unit
Garbage Can

Barrel Drum

7 1/2 circle bolted to drum
3/4 x 2 3/4 circle
1/2" steel rod

16 1/2 x 8
34 3/4

1 x 3 corner brace
40 5/8
29 3/4
40"
Three Bin Turning Units:
4.) Building and Maintaining a Compost Pile

Composting works best when different materials, both wet and dry, are mixed together.
Turning Unit
Black Gold
5.) Using Compost
1. Carbon (brown)
2. Nitrogen (green)
3. Air
4. Water
COMPOSTING

for Kids!

by Robert “Skip” Richter,

County Extension Director,
Travis County,
Texas AgriLife Extension
Setting Up The Bin
Five Containers of Ingredients
Watering
“Don’t Bag It – Compost It”
(Texas A&M: 67 pages!)

“Composting for kids”
(Texas A&M: 31 pages!)

Earth-Kind Composting
and
Ten Reasons Why I Compost
Jimmy Rodgers - Yodeling Cowboy - 1929
"the stars at night are big & bright"