Advanced Composting for Beginners

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Why Compost?

- Manage yard debris
- Manage domestic waste
- Generate soil conditioner
Organic Matter Improves Soil Quality

- Soil moisture
- Nutrient cycling
- Nutrient holding capacity
- Disease, weed suppression
- Erosion reduction
Successful Composting

- Blend the materials
- Manage to suit your style
- Recognize when it's finished
Compost: A Three-legged Stool

- Air
- C:N
- Water
AIR: Why

Manage odor, heat, moisture, biology
AIR: How

- Porosity: heterogeneous texture
- Turning: how long does the \( \text{O}_2 \) last?
WATER: Too wet
WATER: Too dry
WATER: Just right
C:N RATIO: Why

- Efficient composting
- Odor control
- Balanced diet for microbes
C:N RATIO: How

- Green stuff and brown stuff
- Who’s doing the composting?
- Temperature, composting speed
- Final compost nutrient value
What is Green Stuff?

- Nitrogen sources: protein
- Fresh green plant materials
- Manures; meat; bone-, blood-, hoof-meal
- Bagged fertilizer
- Alfalfa pellets

Water that stays in place
What is Brown Stuff?

- Carbohydrates: energy
- Absorbency
- Dried brown plant materials
- Paper, cardboard
- Working hobbyists

Photo Credit: Best of OSU Archives
Basic Compost Recipe

- One part green stuff
- Four parts brown stuff
- Air and water as desired

$1 + 4 = \text{COMPOST}$
Speed Survey:

What is the right way to compost?
We’re All Right

- Aerobic composting
- Anaerobic composting
- Sheet composting
- Direct soil incorporation
Some are More Right than Others

- Effort, time, personal preference
- Weeds, insects, disease problems
- Speed, space
- Nuisance value
- Compost quality
Methane Digestion

- No fuss, low work waste disposal
- Converts solids to CO₂, CH₄ and water
- May produce plant-toxic by products

Gedye: there are many brands
Pop Quiz: Compost Maturity

When is compost finished?
When you say it is

- Intended use?
- Very immature composts – toxic plant effects
- Very mature composts – soil biology
Special Topics
Pop Quiz: Food Waste

What kinds of food scraps can be composted?
If you can eat it, you can compost it.
Six Rules for Safe Food Waste Composting.

Never put in direct contact with soil
Never have food as top layer
Layer in absorbent carbon sources
Compost aerobically in hot, active pile
Turn the whole pile when you add food waste
Turn frequently
Compostable, Biodegradable

- Plastic bags
- Service items
- Quality of the final product
Wood Ash

- Soluble K and P
- Readily available
- Raises soil pH
- Not for acid-lovers
- 5-10 pounds per 100 square feet per year – no more!
- Annual soil testing
Pet Waste
Pet Waste

- Pathogen source
- Consult your hauler
- Bury or process in methane digester
- NEVER put in contact with edible plants or garden soil
Manure as a Soil Amendment
Common Manures: Hot to Cold

Hot & cold refer to the amount of volatile ammonia.

But Also:
- Feed
- Storage conditions
- Age
Manure in the Home Landscape

- Apply during the growing season or
- Apply in late summer with a cover crop.
- Don’t apply in the autumn or early spring.
- Which part of the crop do you eat?
- Never use raw hog manure; dog, cat, or human waste.
Well Rotted Manure

Compile → Water

Heat → Turn
Keep your compost pile covered during the rainy season
And during the dry season.
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Success with Vermicomposting

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Vermicomposting

- Select container
- Select bedding
- Locate red wigglers
- Assemble worm bin
- Add food and manage
Select Container

Select Container
Select Bedding

- Shredded paper
- Newsprint
- Leaf mold
- Manure
- Commercial mix
Locate Red Wigglers
Assemble Worm Bin

- Container
- Shredded paper
- Soil
- Eggshells
- Water
Add Food and Manage

- Monitor moisture levels
- Monitor for insects
- First read the book
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