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
WATER: Too wet
WATER: Too dry
WATER: Just right
#1 reason for failure: not enough water.
Squeeze a handful, **hard** – check for drips, look at your hand.

<table>
<thead>
<tr>
<th>Moisture Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>&lt;40%</td>
<td>Does not feel moist</td>
</tr>
<tr>
<td>50-55%</td>
<td>Sheen on gloved hand</td>
</tr>
<tr>
<td>55-60%</td>
<td>1-2 drops</td>
</tr>
<tr>
<td>60-65%</td>
<td>Many drops</td>
</tr>
<tr>
<td>&gt;65%</td>
<td>Stream of water</td>
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Compost Moisture Squeeze Test

Courtesy Compost Design Services
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
Wood 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 = 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 $\text{CO}_2$, $\text{CH}_4$ and water
May produce plant-toxic by products

Gedye: there are many brands
Turning Compost
Lift composter from the compost. Place on chicken wire or hardware cloth. Begin forking the compost into the composter.
Layer in food waste, fresh grass clippings and other fresh materials as you move compost.
Use the fork to break up clumps as you go.
Alfalfa pellets - a good source of N.
Important Points

Tool choice is personal.

Compost method choice is personal.
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.
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
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
NO!  Yes!

Predator species

Prey species
Common Manures: Hot to Cold

Hot & cold refer to total nitrogen.

But Also:
• Feed
• Storage
• 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.
Sod

Photo Credit: D Putnam, UC Davis
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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First Read the BOOK

Worms Eat My Garbage
by Mary Appelhof

Many editions and revisions

Wormwoman.com
Vermicomposting

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

Commercial mix
Shredded paper
Newsprint
Leaf mold
Manure
Locate Red Wigglers

Yes!
WE HAVE
WORMS
FOR SALE

Yes!
Assemble Worm Bin

- Plastic container
- Shredded paper
- Soil
- Eggshells
- Worms
- Water
Add Food and Manage

Monitor moisture levels
Monitor odor
Monitor egg laying
Monitor other insects
Manage the Bedding