

COMPOSTING AND GOOD SOILS: A GARDENER'S BEST TOOLS

Spring Home Gardeners School

WHY SHOULD WE CARE ABOUT SOIL HEALTH?

- Basis for healthy plants, host vital microbial and fungal communities, and allow plants easy access to moisture and nutrients.
- Reduce soil erosion and water runoff
- Have the potential to help mitigate climate change.

IT'S ELEMENTAL: CYCLES

THE ROLE OF SOILS IN COMBATTING CLIMATE CHANGE

SOILS 101

- Factors of Formation: CLORPT (Climate, Organisms, Relief, Parent Material, Topography)
- Soil Textural Components: Sand, Silt, Clay
- Soil Structure: Aggregates
- Soil Biology/Chemistry

SUSTAINABLE SOIL HEALTH PRACTICES

- Low/No Till (Minimize disruption)
- Cover Cropping/"Continuous Cover"
- Organic Matter is the basis for soil health

BENEFITS OF BACKYARD COMPOSTING

1. Waste reduction: 26% of all waste is organic/vegetative
2. Resource creation (Organic matter crucial to soil health)

HOW TO COMPOST:

BUILDING THE PILE: ESSENTIALS OF COMPOSTING

- c:n ratio: brown-green: 2:1 (or 1:1) by volume
- moisture: about as damp as a rung out sponge
- aeration: turning pile accelerates decomposition
- volume: approximately one cubic yard (3x3x3)
- surface area: the greater the surface area the faster the decomposition

WHAT CAN YOU COMPOST?

- YES: lots of things! e.g. vegetative kitchen and garden materials, animal manure, coffee grinds, houseplant clippings, hair
- NO: Meats, fats, oils, dairy products, pet waste (from meat-eating pets), contact poisonous plants, disease- or insect-infested plants, aggressive plants, weed seeds, colored paper, charcoal ash

METHOD OPTIONS: HOT PILE (BATCHING) VS. COOL PILE (LAYERING)

SYSTEMS: Keep compostable material organized, more efficient and more aesthetically pleasing

- Single or Multi-Bin Systems
- Homemade or Manufactured

OTHER OPTIONS FOR FOOD SCRAP MANAGEMENT

- Soil Incorporation/Trenching
 - α At least 12" from surface
 - α Don't plant where you're burying materials
 - α 6-8 weeks for decomposition.
- Vermicomposting: RED WIGGLERS (not earthworms)

Finished compost:

- Improves Soil health and texture
- Makes mineral nutrients more readily available to plants, improving growth
- Reduces need for synthetic fertilizers, pesticides (reducing non-point source pollution)
- Increases water-holding capacity of soils: keeping nutrients in solution, and reducing erosion, watering requirements, plant stress
- Moderates soil temperature, reducing plant stress

USING FINISHED COMPOST

- Topdressing (under mulch) (Benefits of mulching: moderate soil temperature, retain moisture, control weeds, protect tree/ shrubs from mower/trimmer Blades) **Don't Over mulch.**
- Soil Amendment (above ground when planting trees/shrubs)
- Potting/Seed Starting Mix (Be sure to use mature compost)
- Compost Tea: 1:10 parts compost to water, steep
- 1 hour to 7 days (aerate) in covered container

SOME OF MY FAVORITES:

Books: Composting

Weedless Gardening by Lee Reich

The Rodale Book of Composting by Rodale Press

Worms Eat My Garbage by Mary Apelhof, Flower Press.

Let it Rot! The Home Gardener's Guide to Composting by Stu Campbell.

The Incredible Heap, A Guide to Compost Gardening by Chris Catton, St. Marten's Press, 1983. Out of print--check your local library.

Backyard Composting: Your Complete Guide to Recycling Yard Clippings by Harmonious Technologies. Available through amazon.com for as little as 10 cents!

Books: Soils

The Soul of the Soil by Joseph Smillie and Grace Gershuny

Teaming with Microbes by Jeff Lowenfells and Wayne Lewis

Teaming with Fungi by Jeff Lowenfells

Mycorrhizal Planet by Michael Phillips

The Hidden Half of Nature by David Montgomery and Anne Bikle

Books: Soils and Climate Change

Drawdown by Paul Hawken

Websites: Composting and Soils

- Google “No nonsense composting information”. In general .org or .edu sites are most reliable for strictly informational (i.e. not sales) purposes.
- www.recycleworks.co.uk/
- www.leereich.com
- www.makedirtnotwaste.org
- www.compost-bin.org
- www.emilycompost.com/compost.htm
- www.nrcs.usda.gov (extensive soil health information)

Compost Bins, Tools and Scrap Buckets

Commercially manufactured bins are available through garden centers, hardware stores, mail order supply companies, and some county or municipal recycling offices. Several sources are listed below.

- Lee Valley Tools, 1-800-871-8158 or www.leevalley.com
- Gardener's Supply Co., 800-876-5520 www.gardeners.com
- Brandbuilders LLC, The Earth Machine (in quantities of 25 or more) 1-800-842-0527

Worms and Worm Bins

Red worms (aka red wigglers, manure worms, (latin Eisenia fetida) can be used for indoor composting, or added to an outdoor pile or garden.

- www.compost-bin.org/buy-red-worms
- www.wormwoman.com 269 327-0108 urbanwormcompany.com, www.wormmainea.com

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