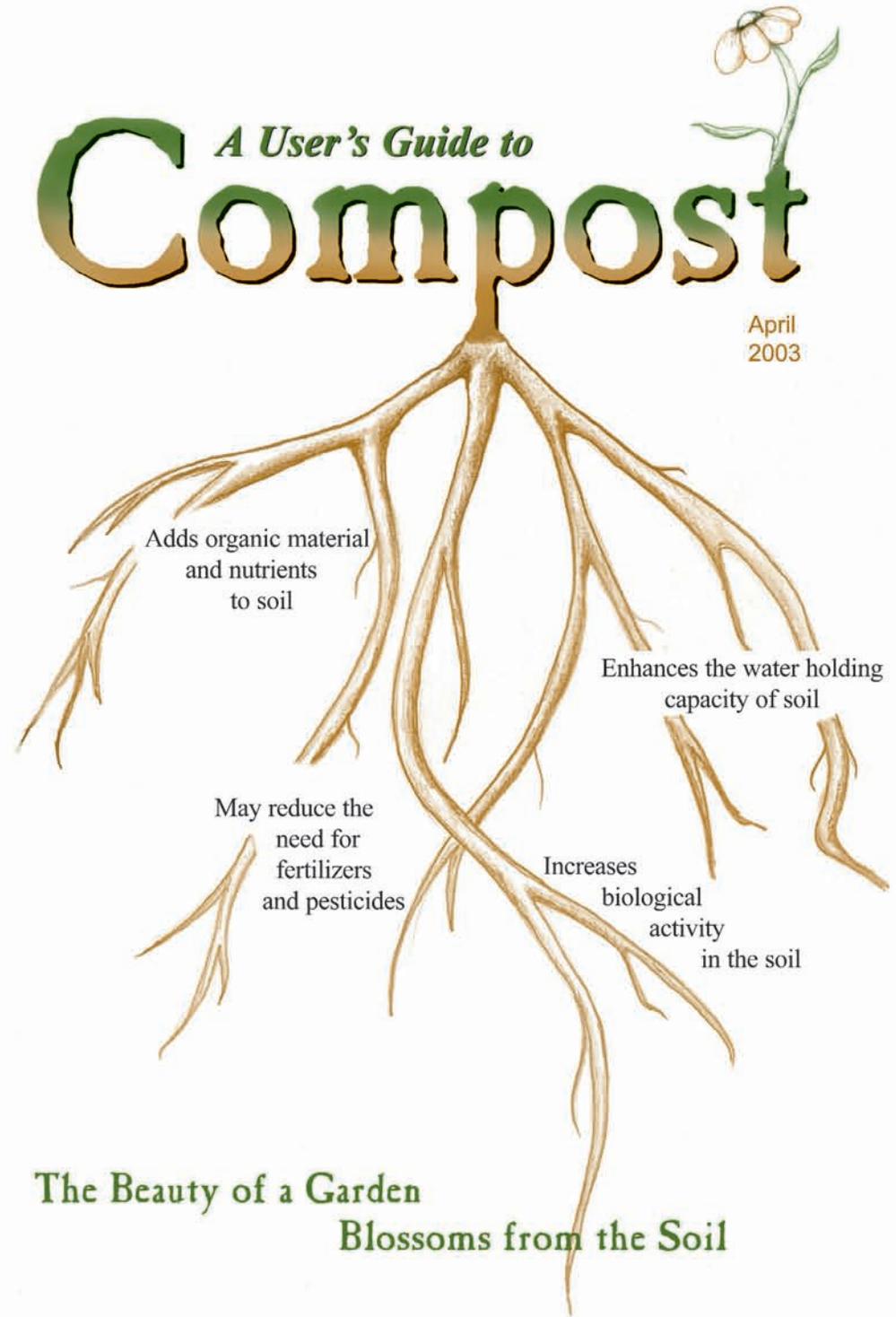




A User's Guide to Compost

April
2003



The Beauty of a Garden
Blossoms from the Soil

A joint project of the Composting Council of Oregon,
Washington Organic Recycling Council, and the Washington
County Cooperative Recycling Program.



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Tips to Remember:

- * *Don't put plants into 100% compost*
- * *Mix compost thoroughly into existing top soil*
- * *Use compost at the recommended application rate*

Developed by the Washington County Cooperative Recycling Program of Oregon

A cooperative recycling program of Washington County and the cities of Banks, Cornelius, Durham, Forest Grove, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, Wilsonville, and the local franchised haulers.

www.co.washington.or.us/recycle

Resources

Natural Gardening, Soils, and Home Composting

City of Seattle

www.ci.seattle.wa.us/util/rescons/plantnaturally/default.htm

King County

www.metrokc.gov/soils

Metro

www.metro-region.org

Oregon State University Extension Service

extension.oregonstate.edu/index.php

Washington State University Cooperative Extension Service

ext.wsu.edu

California Integrated Waste Management Board

www.ciwmb.ca.gov/organics

Clopyralid

Washington State University

www.puyallup.wsu.edu/soilmgmt/clopyralid.htm

Oregon Department of Environmental Quality

www.deq.state.or.us/wmc/solwaste/composting.html

Compost Tea

Compost Tea Industry Association

www.composttea.org

International Compost Tea Council

www.intlctc.org



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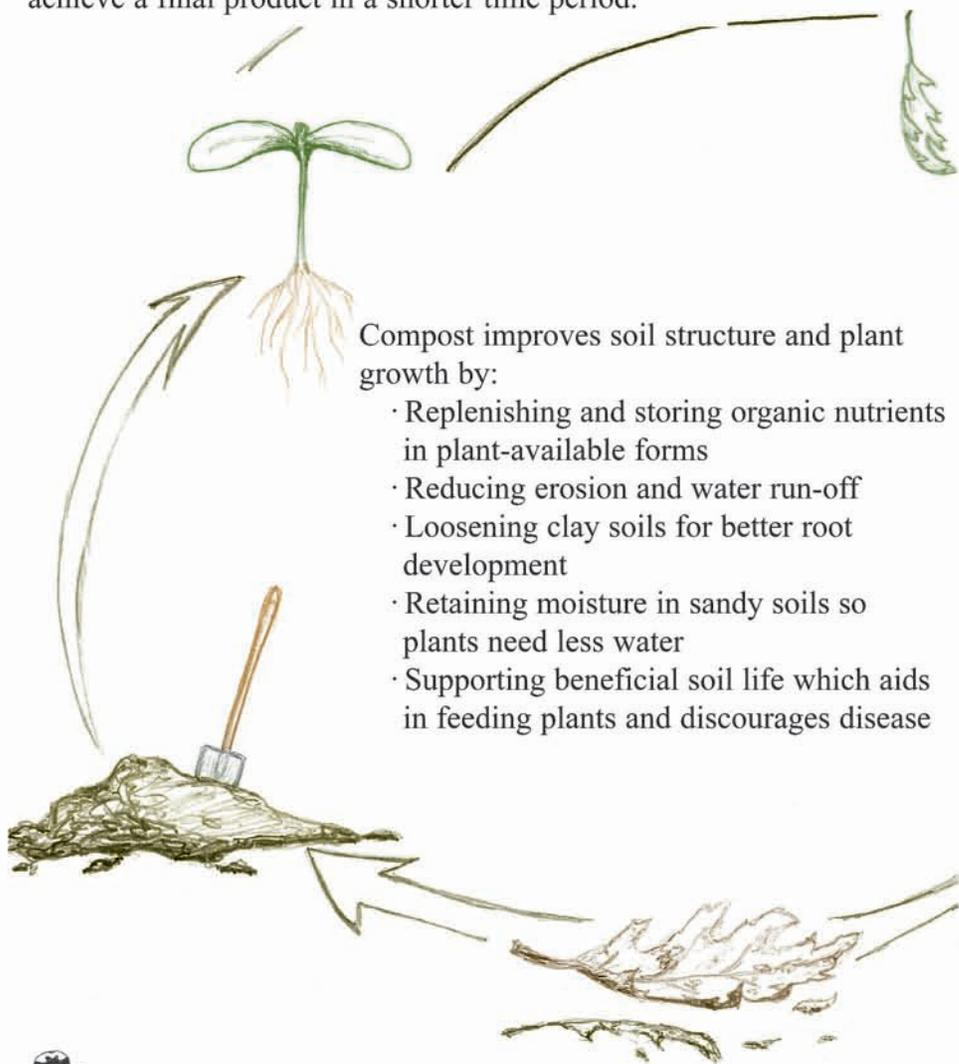
Thank you for your interest in compost.

Compost is a wonderful product. It enhances soil quality, helps gardens save water, and supports your community's efforts to recycle yard debris. All this helps to conserve our natural resources and reduces the amount of material sent to the landfill.

Compost is a natural and gentle additive to your garden, and can be used regularly to enrich your soil. This guide is designed to help you get the most from the compost that you buy.

Compost: A Natural Cycle

Composting is a natural process in which micro-organisms and macro-organisms break down organic material (leaves, twigs, grass) into a dark crumbly soil amendment. Modern compost facilities manage the natural biological composting process to achieve a final product in a shorter time period.



** In Washington State, lawn and turf use of clopyralid-containing products is now banned. This ban does not apply to use in agricultural products. Clopyralid may still enter compost facilities through manure and other agricultural waste.

In Oregon, lawn and turf use of clopyralid-containing products is now temporarily restricted. Oregon is moving towards a permanent restriction.

Clopyralid - Important Questions to Ask

Ask Your Compost Provider:

- ☞ **Has the facility tested for clopyralid?**
The presence of clopyralid may not be a problem at that facility. Ask if the facility has been testing for it and is prepared to answer the following question.
- ☞ **What application rate do you recommend for the compost I am buying or for the plants I have?**
The facility may recommend an application rate different than listed on pages 4-6 of this booklet. Tell the facility if you intend to plant clopyralid-sensitive plants (listed on previous page).

Ask Your Gardener/ Landscaper:

- ☞ **Does your gardener/ landscaper apply clopyralid-based products on lawn (home, apartment, or business)?****
This is especially important to know if the person doing the clopyralid application and the person hauling the lawn clippings are not one and the same.

Ask Your Garden Store:

- ☞ **Is clopyralid in the garden herbicide that I am buying?***
It is important to read the labels, especially of herbicides and pesticides. If you use clopyralid-based products, please make sure that the material that you use those products on is not sent to a compost facility.

For more information on clopyralid, please see the links on page 11.



Watch What Goes into Your Garden

-A Special Note on Clopyralid

Common name: Clopyralid

Chemical name: 3,6-dichloro-2-pyridinecarboxylic acid

List of Common Products in Oregon and Washington:

<http://www.deq.state.or.us/wmc/solwaste/clopyralid.html>

Clopyralid (pronounced clo- peer'- a- lid) is an herbicide found in some lawn, garden, and agricultural products.** Clopyralid is a broad-leaf herbicide (weed killer) for use on clover, thistle, dandelions, etc. Clopyralid-containing products that are found around homes and businesses are, for the most part, applied** by professional yard and landscape maintenance companies to lawns. Some home lawn care products may also contain clopyralid.**

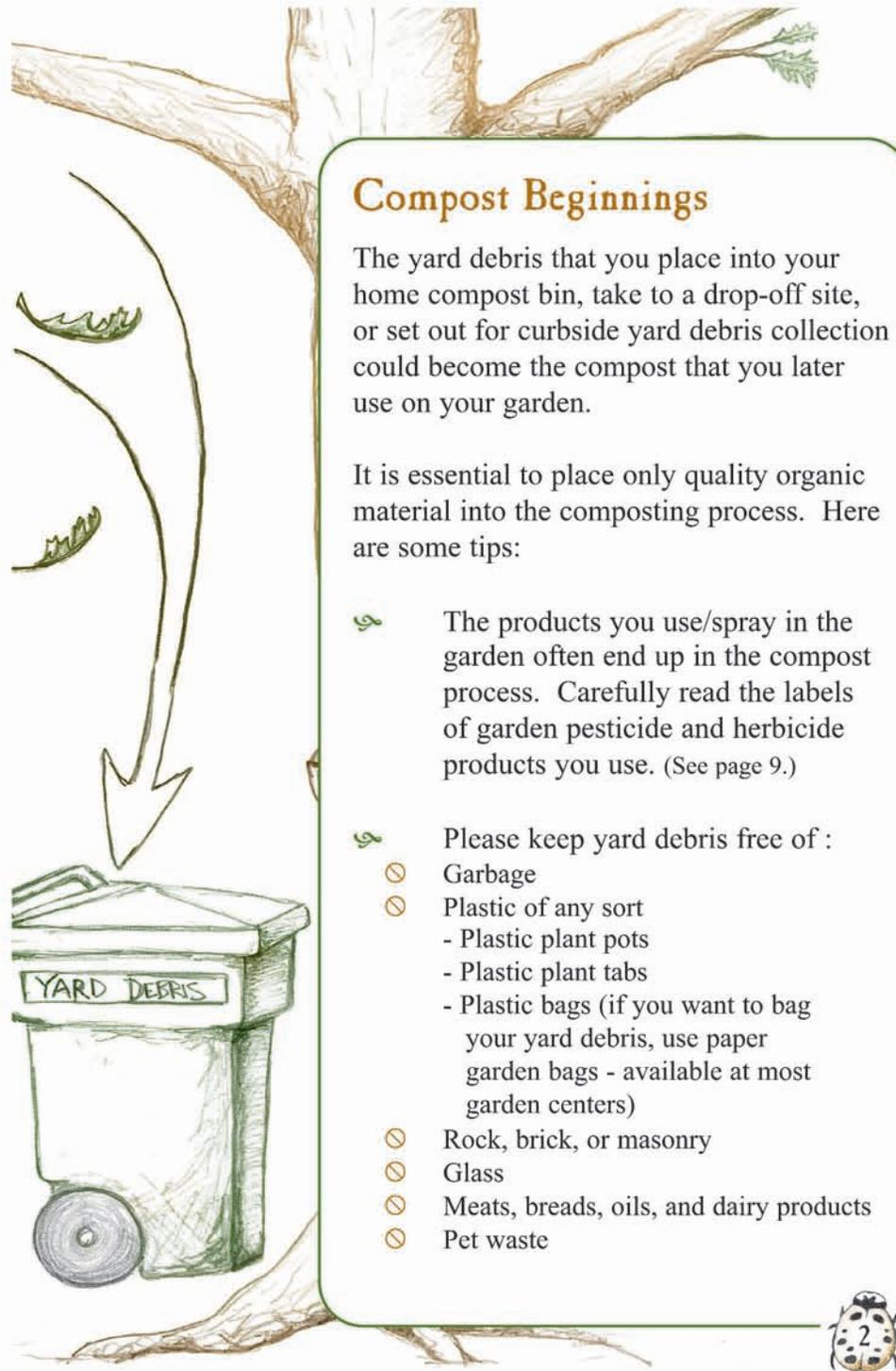
Unlike most other herbicides and other pesticides, clopyralid has been demonstrated to break down more slowly than other chemicals. This means clopyralid may be identified even after the composting process is completed.

Even though clopyralid in compost has not proven to be a threat to humans or animals, when compost containing clopyralid is used in large amounts, it may affect the following sensitive garden plants, namely:

- | | | |
|----------------------|------------|--------------|
| · carrots | · lettuce | · potatoes |
| · eggplants | · pansies | · sunflowers |
| · legumes: | · parsley | · tomatoes |
| peas, beans, lentils | · petunias | |

The composting industry is actively working to prevent clopyralid from further entering the commercial composting process.

Please be certain that grass clippings and yard debris from areas where clopyralid has been applied do not go to a composting facility.



Compost Beginnings

The yard debris that you place into your home compost bin, take to a drop-off site, or set out for curbside yard debris collection could become the compost that you later use on your garden.

It is essential to place only quality organic material into the composting process. Here are some tips:

- 🌿 The products you use/spray in the garden often end up in the compost process. Carefully read the labels of garden pesticide and herbicide products you use. (See page 9.)
- 🌿 Please keep yard debris free of :
 - ⊗ Garbage
 - ⊗ Plastic of any sort
 - Plastic plant pots
 - Plastic plant tabs
 - Plastic bags (if you want to bag your yard debris, use paper garden bags - available at most garden centers)
 - ⊗ Rock, brick, or masonry
 - ⊗ Glass
 - ⊗ Meats, breads, oils, and dairy products
 - ⊗ Pet waste



Building Rich & Healthy Soil

With Compost

To grow healthy, productive plants you need healthy, productive soil.

Healthy Soil:

- ☞ Is teeming with life! Quality soil is a miniature ecosystem. A teaspoon will have upwards of four billion tiny organisms which regulate the soil, suppress disease, and discourage pests.
- ☞ Retains moisture and allows drainage. Too much sand does not hold water and too much clay pools water. Quality soil allows water to drain through, retains moisture, and promotes strong root growth.
- ☞ Is full of organic nutrients. Most plants draw their nutrients from their roots and thrive in a nutrient-rich soil.

To maintain the organic structure of your soil, compost can be added on a regular basis or annually. Many people choose to amend their soil with compost in the fall.

Reminder:

A healthy garden and landscape is naturally resistant to pests, drought, weeds, and diseases. Maintaining healthy soil may allow you to dramatically reduce or eliminate use of chemical fertilizers and pesticides.

Soil is a planting medium.

Compost is a soil amendment.

Do not place plants directly into 100% compost.

80% soil and 20% compost works well for most plants.



Selecting Quality Compost

Compost is available in many product types and blends that may be used for different gardening applications. The type of feedstock, the composting process, and any supplementary additives determine the end product.

Many facilities offer a variety of products such as garden mix, potting soil, and planting mix.

Quality Indicators

For most compost applications you will want a finished product that has matured and stabilized. Look for material:

- ☞ with a dark, crumbly texture
- ☞ with a mild, earthy odor

For most compost applications you will not want compost that is extremely dry or wet, stinky, or extremely hot (please note that it is okay for compost to be warm and to give off some steam).

Feel free to ask your compost provider if they have a quality control program in place.



Remember:

Your compost provider can help you pick the best compost mix for your needs.



The Composting Process

Even though there are a variety of composting methods, most composting follows a similar process:

1. Grinding Organic Materials:

Depending on the facility, the feedstock available, and the desired compost product, different combinations of materials are added together and ground into small pieces:

- Nitrogen-rich materials (grass, fresh plant cuttings, biosolids, and manures)
- Carbon-rich materials (dried leaves, sticks, and straw)

2. Heating Up:

The material is placed into piles where it begins to heat up from the biological activity of the compost ecosystem. Typically, compost temperatures must reach at least 130^f in order to destroy weed seeds and pathogens. The compost is turned or aerated, allowing the compost ecosystem to breathe. After a period of time, the nitrogen-rich material is depleted, the biological process slows, and the hot compost begins to cool.

3. Finishing:

Typically "finished" compost has undergone a series of steps to ensure maturity and stability. The cooling compost is aged, which allows the decomposition process to stabilize.

The end product can be made entirely of the composted feedstock or a combination of the composted feedstock plus additives (such as peat and minerals).

Applications for Compost

To maximize compost's benefit, mix it into the existing soil, and water your garden thoroughly following the addition of compost.

🌀 Garden Mix



Apply a 1 inch - 2 inch layer of compost and mix into the top several inches of existing soil. Note: For sandy soil, use up to 3 inches of compost; for sensitive plants do not exceed 1 inch of compost. (See page 9 for a list of sensitive plants.)

🌀 Mulch*



Apply a 1 inch - 2 inch layer of coarse and woody compost and rake smooth as needed. To allow proper airflow, it is best not to pile mulch up on the base of trees and shrubs.

🌀 Top Dressing for Lawns



Spread a thin layer of fine-grained compost, up to a depth of ¼ - ½ inch, just covering the surface. For established lawns, plug-aerate the lawn and rake compost down into the grass.

Compost Tea

Compost tea is a liquid extract of compost with many of the same beneficial nutrients, micro-organisms, and organic compounds. Various techniques are available to make compost tea, ranging from simple homemade bag-in-a-barrel methods to commercially manufactured, aerated compost tea systems. Proper application of compost tea is a tool to enhance soil and plant health.

* Compost can be used for mulching; however, the fertility of compost may encourage wind-blown weed seeds to germinate.



How Much Compost to Use

- 🌀 Estimate the planting area (Math Hint: Square feet = length x width)
- 🌀 Decide upon the appropriate application depth of the compost (page 4)
- 🌀 Use the charts below to estimate your compost needs - we have provided two different questions to evaluate this amount

Question: *I have a plot about this big, how much compost do I buy?*

Plot Size	# of Sq Feet	Mulching 1/2" Deep	Garden Mix 2" Deep
1' x 5' plot	5 sq ft	0.21 cu ft of compost	0.83 cu ft of compost
5' x 5' plot	25 sq ft	1.04 cu ft of compost	4.17 cu ft of compost
5' x 10' plot	50 sq ft	2.08 cu ft of compost	8.33 cu ft of compost
10' x 10' plot	100 sq ft	4.17 cu ft of compost	16.66 cu ft of compost
1 acre	43,600 sq ft	1,815 cu ft of compost (67 cu yd)	7,250 cu ft of compost (268 cu yd)

Question: *If I buy this much compost, how many square feet will it cover?*

Compost Quantity	Mulching 1/2" Deep	Garden Mix 2" Deep
1 cu ft bag of compost	24 sq foot area	6 sq foot area
1.5 cu ft bag of compost	36 sq foot area	9 sq foot area
2.2 cu ft bag of compost	53 sq foot area	13 sq foot area
2.5 cu ft bag of compost	60 sq foot area	15 sq foot area
3 cu ft bag of compost	73 sq foot area	18 sq foot area
1 cu yd of compost	650 sq foot area	162 sq foot area



The most effective use of compost is to add it periodically at the appropriate application rate.

