

A USER'S GUIDE TO COMPOST

**The Beauty of Your Lawn & Garden
Blossoms from the Soil**



Compost adds organic material and nutrients to the soil, increases water-holding capacity and biological activity, and improves plant growth and health.

A project of the Washington Organic Recycling Council, with support from the Washington State Department of Ecology's Public Participation Grant program.

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original artwork provided by:



The Beauty of Your Lawn and Garden Blossoms from the Soil

Thank you for your interest in compost.

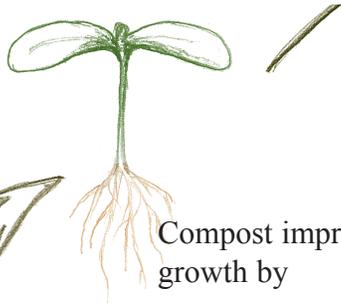
Compost is a versatile product with many benefits. It enhances soil quality, helps save water, and supports your community's efforts to recycle organic debris. All this helps to conserve our natural resources and reduces the amount of material sent to the landfill.

Compost-amended soil also helps break down pollutants and absorb stormwater runoff. By making nutrients slowly available to plants and enhancing plant health, compost can reduce the need for chemical fertilizers and pesticides. All these benefits help protect our lakes, rivers, and marine waters from pollution and excessive runoff.

Compost is a natural amendment for your lawn or 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.

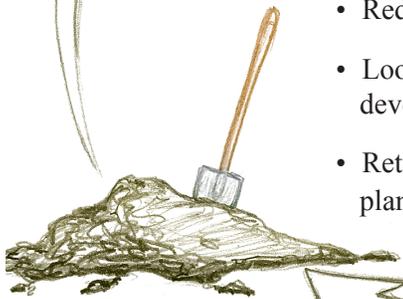
Compost: A Natural Cycle

Composting is a natural process in which micro-organisms and macro-organisms break down organic material (leaves, twigs, grass, etc.) into a dark crumbly soil amendment. Modern compost facilities use the same natural biological composting process. Their controlled-temperature process works faster, breaks down pesticide residues, and also kills weed seeds and plant diseases.



Compost improves soil structure and plant growth by

- Replenishing soil organic matter, and storing nutrients in plant-available forms
- Supporting beneficial soil life
- Reducing erosion and water run-off
- Loosening clay soils for better root development (increasing soil pore space)
- Retaining moisture in sandy soils so plants need less watering.



Compost Beginnings

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

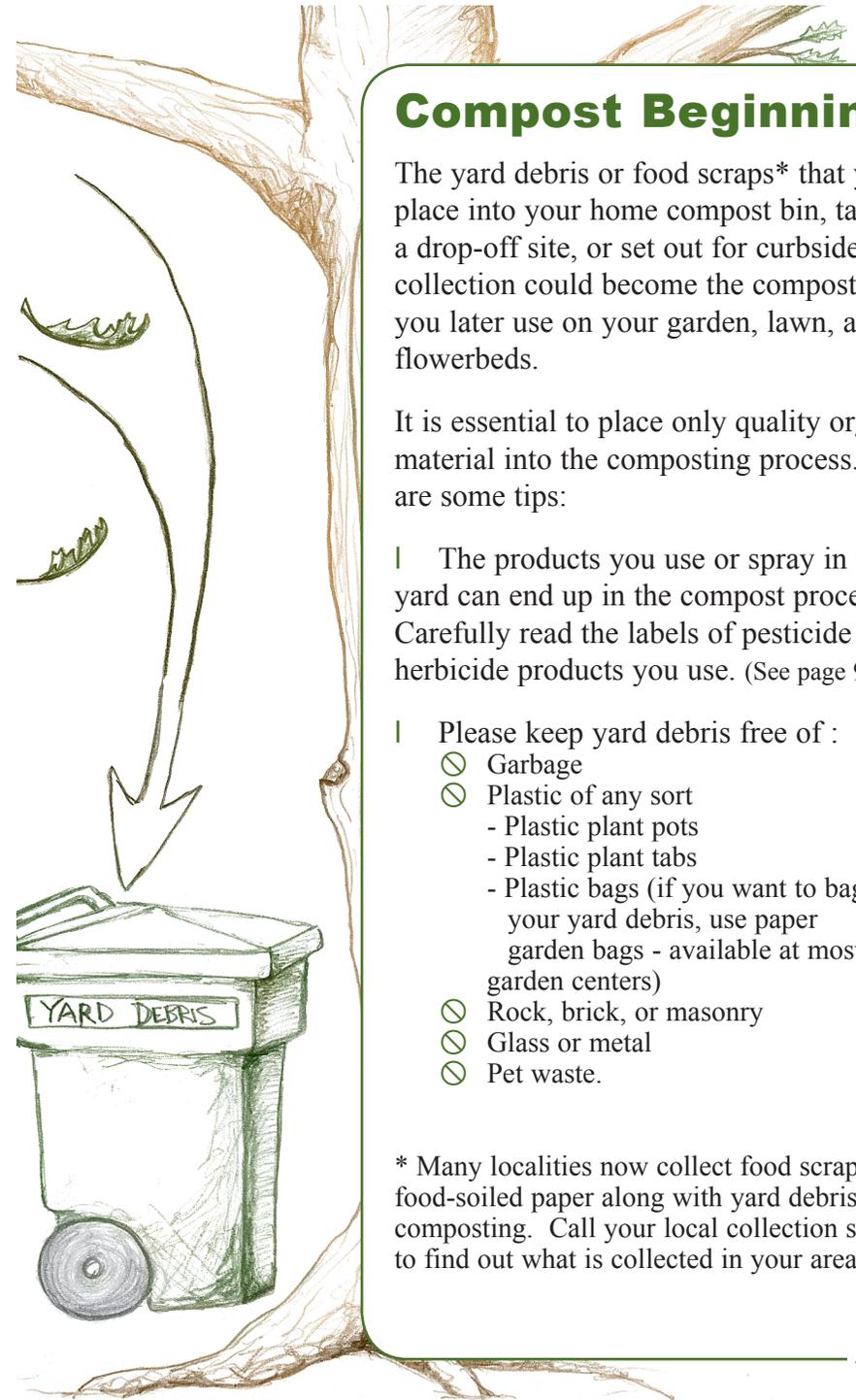
It is essential to place only quality organic material into the composting process. Here are some tips:

! The products you use or spray in your yard can end up in the compost process. Carefully read the labels of 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 or metal
- ⊗ Pet waste.

* Many localities now collect food scraps and food-soiled paper along with yard debris for composting. Call your local collection service to find out what is collected in your area.



Building Rich and Healthy Soil With Compost

To grow healthy plants you need healthy soil.

Healthy Soil:

- | Is teeming with life! Healthy soil is a miniature ecosystem. A teaspoon of healthy soil will have upwards of four billion tiny organisms which recycle nutrients, suppress disease, and discourage pests.
- | Retains moisture but allows drainage. Healthy soil has structure that allows water to drain through, retains moisture, and promotes strong root growth.
- | Is full of organic nutrients. Plants depend on the micro-organisms found in healthy organic-rich soil to provide nutrients to their roots, and help them thrive.

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

Soil is a planting medium. Compost is a soil amendment.

Do not place plants directly into 100% compost.

Ask your supplier or see next page for mixes for different uses.

Washington State Encourages the Use of Compost, to Protect Our Water Quality

The Washington State Department of Ecology recommends that soils on construction sites be restored with compost before planting, and also encourages the use of compost for construction site erosion control, to reduce stormwater runoff and help keep our rivers, lakes, and Puget Sound clean.

Learn more at www.SoilsforSalmon.org or www.BuildingSoil.org.



Applications for Compost

Planting New Garden Beds or Lawns

Spread a 2-4 inch layer of compost and mix into the upper 6-12 inches of existing soil: use more in sandy soils, and less in heavy clay. Reapply ½-1 inch annually on garden beds.

Mulch (surface applications on landscape beds)

Spread a 1-2 inch layer of coarse, woody compost. To allow proper airflow, it is best not to pile mulch around the stems of trees and shrubs. Pull mulch 1-2 inches away from stems.

Top Dressing for Lawns

Spread a ¼ to ½ inch layer of fine screened compost, and rake it into the lawn. For best results, plug-aerate the lawn before top-dressing. Overseeding at the same time will thicken thin patches in lawns.

Blended (Manufactured) Topsoils

Good quality “topsoil” products usually include 10-40% compost by volume, mixed with a sandy loam soil that allows good drainage. These compost-soil blends help establish healthy lawns and gardens.

When to Use Compost?

- Any time you’re preparing soil for planting
- Mulching beds and gardens in spring, summer, or fall
- Top-dressing lawns in spring or fall.



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. (Abbreviations: ft = foot; yd = yard; sq = square; cu = cubic.)
- | Conversions: 9 square feet = 1 square yard; 27 cubic feet = 1 cubic yard.

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

Plot Size	# of Sq Feet	1/2" Deep - Mulching or Top-dressing	2" Deep - Amending new lawns or gardens
5' x 10' plot	50 sq ft	2.08 cu ft of compost	8.33 cu ft of compost (0.31 cu yd)
10' x 10' plot	100 sq ft	4.17 cu ft of compost	16.66 cu ft of compost (0.62 cu yd)
20 x 50' plot	1000 sq ft	41.7 cu ft of compost	166.7 cu ft of compost (6.2 cu yd)
1 acre	43,600 sq ft	1,815 cu ft of compost (67 cu yd)	7,257 cu ft of compost (268 cu yd)

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

Compost Quantity	1/2" Deep - Mulching or Top-dressing	2" Deep - Amending new lawns or gardens
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
1 cubic yard of compost	648 sq foot area	162 sq foot area



Compost Works! Soil blending trials conducted in 2008 by the Washington Organic Recycling Council, with funding from the Washington Department of Ecology, demonstrated that compost improves soil structure (lowers bulk density), nutrient availability (increases cation exchange capacity), moisture holding capacity, and supplies both nutrients that plants need and organic matter that supports soil life. See the 2008 Soil Blending Trial report at

www.compostwashington.org.



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 (material) available, and the desired compost product, different combinations of materials are added together and ground into small pieces:

- Nitrogen-rich materials (such as grass, fresh plant cuttings, biosolids, and manures)
- Carbon-rich materials (such as dried leaves, woody materials, and straw).

2. Heating Up:

The material is placed into piles where it begins to heat up from the biological activity of the compost microbes. Typically, compost temperatures are required to reach at least 131 degrees F in a specified time period in order to destroy weed seeds and pathogens. The compost is turned or aerated, allowing the composting microbes 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 slow down and the finished compost to stabilize.

The end products you purchase may be entirely compost, or a combination of compost blended with uncomposted additives (such as peat, bark, minerals, or soil).



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 blends based on compost, such as garden mix, potting soil, planting mix, mulches, turf top-dressing and soil blends.

What to Look for in Compost

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 odor



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

Quality Testing at Composting Facilities

Feel free to ask your compost provider if they have a quality control program, and ask for test results. Compost facilities in Washington are permitted by the Department of Ecology and must meet standards for both the composting process and contaminants, ensuring a quality product. Some facilities also participate in the “Seal of Testing Assurance” (STA) testing program. See “Resources” on page 11 to learn more.

Remember:

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



Compost Questions and Answers

What is compost?

Compost is a natural humus-like soil amendment that results from the controlled aerobic (with oxygen) decomposition of organic materials. Compost is not soil – it should be mixed with soil. It is not fertilizer, although it contains many slowly released nutrients.

What materials (“feedstocks”) are used to make compost?

Compost facilities in Washington recycle a variety of organic materials, including yard debris, food scraps, manure, biosolids, forest residuals like sawdust and bark, construction wood, and agricultural residues. All of these materials can be used to produce high quality compost. Your supplier can tell you which materials they compost.

How do I know I’m getting safe, quality compost?

Fortunately, in Washington we have strict permitting and production standards for compost facilities, that include both time and temperature requirements and contaminant limits.

What about weed seeds, plant diseases or pesticide residues?

The controlled time, aeration, and temperature process required in Washington has been shown to kill weed seeds and plant diseases. That same process breaks down most pesticide residues. There are a few agricultural pesticides that are not easily broken down, and permitted Washington compost manufacturers carefully watch their feedstocks to keep those materials out of the composting process.



Ask Your Compost Supplier

Whether you’re buying direct from the composting facility, or from a local vendor, here are some good questions to ask:

- What ingredients go into your compost?
- What compost products or blends do you sell?
- Are there quality control or testing results available for these products? (These may be on the manufacturer’s website.)
- Which product is best for my intended use?
- What application rate do you recommend?
- How much do I need for my area? (Or see pages 4-6.)

Comparing Landscape Products

A variety of soil and landscape products are sold. Here’s a comparison:

Compost is stable, decomposed organic matter, excellent for improving soil structure, fertility, moisture holding capacity, and plant growth.

Mulch is any material applied to the soil surface. Woody mulches (high in carbon, low in nitrogen) like wood chips, bark and woody composts are great for woody plants. Annual plants should be mulched with nutrient-balanced mulches like compost, grass clippings, or leaves.

Peat Moss is partially decayed sphagnum moss from peat bogs. It provides soil porosity, but not the nutrients or biological diversity for healthy soil that compost provides.

Fertilizers are concentrated sources of plant nutrients, used in small amounts to supplement natural soil fertility.

Topsoil that is sold is usually not native topsoil. Quality manufactured topsoils are a blend of native sandy sub-soils with composted organic matter to support soil life.



Resources

Compost Organizations

Washington Organic Recycling Council

Find a compost producer in your area
www.compostwashington.org

US Composting Council

Seal of Testing Assurance (STA) program
www.compostingcouncil.org/programs/sta/

Restoring the Soil to Protect our Waterways

www.soilsforsalmon.org

Compost amendment and erosion control
during construction: information for builders
www.buildingsoil.org

Natural Lawn & Garden Care, Soils, and Home Composting

City of Seattle

www.seattle.gov/util/services/yard

King County

www.kingcounty.gov/soils

Washington State University

www.puyallup.wsu.edu/soilmgmt/

