

## Buying Topsoil/Soil Blend Products

Ecology's Beyond Waste plan (Washington's solid waste plan at [www.ecy.wa.gov/beyondwaste](http://www.ecy.wa.gov/beyondwaste)) calls for improving the quality of recycled organic products such as soil blends, mulches and composts. This focus sheet provides general information to consumers such as landscapers, gardeners, and contractors on how to choose high quality topsoil/soil blend products. Armed with information, consumers will ask for high quality topsoil or soil blend products to better meet their needs.

### What are topsoil/soil blend products?

Strictly speaking, topsoils come from the top layer of native soils and are not blended with other materials. Soil blends (often marketed as "topsoils") are made by blending *one or more recycled organic material* with sand, soil or other products to form a growing medium for plants. Landscapers and home gardeners buy soil blend products to improve plant growth. Soil blends may supply nutrients, increase moisture and nutrient holding capacity, and help drainage.

Some examples of *recycled organic materials* commonly used in soil blend products include:

- Compost - produced from the controlled, aerobic decomposition of organic materials such as yard debris, agricultural wastes, animal manures, and food scraps.
- Biosolids - the nutrient-rich organic product of the wastewater treatment process.
- Animal manure.
- Woody materials such as sawdust and woodchips from mills or chipping/ grinding of branches.

The soils used in these products may include natural soils taken from construction and road building project sites, or dredged material from waterways. Other materials such as fertilizers or lime may also be added to increase the nutrient content or adjust pH.

### Should I buy topsoil, or amend my existing soil?

In most cases you are better off amending your native topsoil with compost. Buying topsoil or a soil blend is a good option if your soils are too shallow or rocky to establish your plants. Purchased topsoil has the advantage of having big rocks screened out, and it's easy to have delivered and spread. But to promote root development, you must mix imported topsoils with the existing soil.

#### Learn More

WA state permitted composting facilities list, and home composting information:  
[www.ecy.wa.gov/programs/s/wfa/compost/](http://www.ecy.wa.gov/programs/s/wfa/compost/)

Natural Yard Care guide to improving soil and growing healthy landscapes:  
[www.ecy.wa.gov/biblio/0807064.html](http://www.ecy.wa.gov/biblio/0807064.html)

Soil best practices for builders and new development:  
[www.buildingsoil.org](http://www.buildingsoil.org)

Washington State University's Soils and Soil Testing:  
[www.puyallup.wsu.edu/soilmgmt/Soils.htm](http://www.puyallup.wsu.edu/soilmgmt/Soils.htm)

If you have questions about this Focus Sheet, please contact Canming Xiao at Ecology's Central Regional office:  
[canming.xiao@ecy.wa.gov](mailto:canming.xiao@ecy.wa.gov)

## What should I look for when buying soil blend products?

Many companies create soil blend products for specific uses such as vegetable gardening, potting mixes, or general landscaping. Because no specific labeling or quality standards exist for soil blends, it is important for you to be able to identify quality soil blend products.

Quality soil blend products **should**:

- Contain a minimum of 5% organic matter on a dry weight basis.
- Have a carbon to nitrogen (C:N) ratio between 14:1 and 30:1, depending on planting needs.
- Have a soil clay content of less than 20%.
- Have a pH range suitable for the types of plants to be grown.

Quality soil blend products **should not** contain large amounts of:

- Stones, metals, glasses, or plastics.
- Viable weed seeds.
- Heavy metals like cadmium, mercury or lead.
- Chemical contaminants such as petroleum residues.
- Plant, animal, and human pathogens.

## How do I identify high quality soil blend products?

If the product label or information provided with a bulk product does not give enough information, here are some questions you can ask the vendor to help you choose quality soil blend products:

- What is the recommended use for the product?
- What organic materials were used to make the soil blend product?
- If the soil blend product contains compost, was the compost produced at a state-regulated composting facility?
- Where did the soils come from?
- Are product test results available:
  - Analysis for heavy metals.
  - Organic matter content.
  - Carbon to nitrogen ratio (C:N).
  - Soil nutrient content (especially the available nitrogen, phosphorus and potassium).
  - What is the pH of the product?

**Pathogens:** Microorganisms capable of producing disease or infection in plants, animals, or humans.

**Carbon to nitrogen (C:N) ratio:** An indicator of the amount of carbon (C) relative to the amount of nitrogen (N). A C:N of 14-20:1 is best for garden and lawn establishment, and C:N 20-30:1 is better for establishment of woody plants.

**Soil clay:** A group of minerals smaller than 0.002 mm. Too much clay in soil blend products reduces drainage.

**pH:** A measure of the acidity or alkalinity. pH strongly affects soil properties and the types of plants that will grow and thrive in that soil. Acid loving plants like rhododendrons prefer pH of 4.5 to 5.9. Most other plants prefer a pH of 6.0 to 6.8.

**State-regulated composting facilities:** Facilities that have a solid waste handling permit or an appropriate exemption. Compost produced in compliance with state regulations must meet quality standards including those for heavy metals, weeds, pathogens, and stability.

**Smell, sight, and feel** can also help you select a good product. It should smell earthy (not sour or like ammonia or petroleum), be free of obvious contaminants, and feel crumbly (not sticky, slick, or silty).

### Special accommodations:

To ask about the availability of this document in a version for the visually impaired call Waste 2 Resources Program at (360) 407-6900. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.