

BIOSOLIDS RECYCLING

fact sheet



LANDSCAPING AND GARDENING

“Exceptional Quality” biosolids used in landscapes and home gardens improve the physical and chemical characteristics of soil.

Seeking Solutions

Landscapes in urban and suburban developments often have little or no natural topsoil. The topsoil that may have existed before has often been compacted by heavy equipment during building construction. Soils like these can benefit from amendments such as biosolids composts that provide nutrients and organic matter and improve soil permeability and tilth.

Benefits of Biosolids

Biosolids provide soils with the nutrients that tend to be deficient in Pacific Northwest soils. Biosolids products are used in landscaping and gardening in the following ways:

- *As a fertilizer:* Biosolids products improve plant vigor by adding nitrogen, phosphorus and other nutrients to soils. Biosolids reduce the amount of synthetic fertilizers required because they release nutrients as plants need them.
- *As a soil amendment:* Composts and other biosolids products available for public use improve the physical characteristics of the soil. Compact and clay-like soils are made lighter and more porous; sandy soils benefit from improved water retention.
- *As a mulch:* The addition of biosolids compost as a mulch reduces watering requirements, inhibits weed intrusion and adds beauty to the landscape.
- *As a potting medium:* When mixed with Douglas-Fir bark, biosolids products provide an ideal medium for potted plants and nursery and greenhouse container production. Biosolids compost makes an excellent substitute for manure composts, peat moss and other components of typical soil mixes. Recent research shows that high-quality biosolids blends can be used alone as potting media.



How It Works

Biosolids used in landscaping and gardening must meet the U.S. Environmental Protection Agency’s “Exceptional Quality” requirements. Treatment processes such as composting, heat treatment or thermophilic digestion help satisfy this federal standard. Composting is the most common process for producing an exceptional quality biosolids. Composting is simply a controlled process for breaking down

organic material. Typically, biosolids are mixed with bulking agents like sawdust, wood chips or yard debris. The mixture is then moved into large piles and blended periodically. The activities of microorganisms in the organic material raise the temperature of the compost pile to more than 140 degrees Fahrenheit. The heat destroys pathogenic organisms, which are sensitive to high temperatures. As the organic matter breaks down, a humus-like material is produced. The end product has even lower metals levels than biosolids, has virtually no remaining pathogens and is stable and safe for a variety of uses.

Issues and Concerns

Extensive research has shown that biosolids products are safe for use by the general public. To ensure product safety and quality, the temperature of the material is carefully monitored throughout the treatment process and tested for pathogen and metal content.

As with all garden projects, use common sense and good hygiene when handling any topsoil, fertilizer or biosolids product - wash your hands after use.

What's Happening?

- *Composting:* Composting is the most common method used to produce an exceptional quality biosolids product. Many large and small communities in the Pacific Northwest have active composting operations. Demand for these products usually exceeds the available supply. *Cheney, Granite Falls, Langley, Lynden, Monroe, Port Angeles, Port Townsend (Washington); Eugene, Portland (Oregon); Kelowna (British Columbia); Coeur d'Alene, Grangeville (Idaho)*

Private composting companies receive biosolids from multiple communities and market their products to landscapers and home gardeners. Local delivery programs return a portion of the composted material to the communities from which they originated. *GroCo, Inc., Soil Key (Washington)*

- *Thermophilic digestion:* These digestion and pasteurization processes heat biosolids to over 140 degrees Fahrenheit. The high temperatures reduce pathogens to below detectable limits and aid in odor control and solids reduction. Biosolids processed in this way are often mixed with sand, screened soil or sawdust to create a soil conditioner or growing medium. *Tacoma (Washington); McMinnville (Oregon); Greater Vancouver Regional District, Whistler (British Columbia)*

- *Heat drying:* Heat drying significantly reduces the water content of biosolids and produces an essentially sterile product. *Friday Harbor, Pierce County will be drying in 2005 (Washington)*

