

Using Compost and Wood Chips

In addition, to the multiple benefits to using compost and wood chips, doing so recycles yard wastes and reduces the burden of organic trash on our landfills.

Adding Compost into Soil

The chief advantage of compost is its ability to improve soil structure. Good garden soil is loose and has a high water-holding capacity with adequate drainage. Adding compost to heavy clay soil improves drainage by improving soil structure. Compost also absorbs water and improves the water-holding capacity of sandy soils. To conserve moisture it is essential to have soil with good water-retention.

In addition to improving soil structure, decomposing compost will slowly release plant nutrients. Compost will not provide all the nitrogen that highly productive crops require. Organic gardeners can supplement compost applications with manure to produce good yields without the addition of other fertilizers.

Finished compost is dark brown, crumbly, and is earthy-smelling. Small pieces of leaves or other ingredients may be visible. If the compost contains many materials which are not broken down, it is only partly decomposed. Allow partly decomposed compost

particles to break down further or separate them out before using compost around growing plants.

Compost can be blended into soil mixes and is suitable for most outdoor planting projects. It is typically mixed with other ingredients such as peat moss, shredded bark, sand, or loamy topsoil when used as an outdoor planting mix. Mixing ratios vary; but 10 percent compost is considered to be a minimum, 30 percent optimum and 50 percent maximum in planting shrubs and trees.

Compost has its greatest value when rototilled directly into the soil. One cubic yard of compost covers 108 square feet at three inches, 216 at two inches, and 324 at one inch. The rule of thumb is to spread compost no more than one-third the depth of the rototiller. A one-inch layer of compost should be tilled in six inches. Making two or more passes with the tiller helps blend the compost with the topsoil and break up any clumps of material.

Locations to Pick up or Purchase LinGro Compost

- The City of Lincoln has limited quantities of organic compost, called LinGro, available to the public each spring at the N. 48 Street Transfer Station located at 5101 N. 48 Street. This material must be self-loaded and is available at no cost, on a first-come, first-serve basis. Information on loading pick-ups can be obtained by contacting the Lincoln Recycling Office, 441-8215.
- Delivery of compost within a 50-mile radius of the Bluff Road Landfill is available for a fee. Call the Lincoln Recycling Office at 441-8215 for more information.
- The following area firms have LinGro compost available for a fee: Campbell's Nurseries and Garden Centers, General Excavation, Nebraska Nursery and Color Gardens, Pine Valley Nursery and Landscaping, PreCast Productions, Inc., Seeds of Life. Landscapers can obtain compost upon request.
- Information on LinGro Compost is also available through the City's Web site: www.lincoln.ne.gov – keyword "compost."



Wood Chips as Mulch

Wood chip mulch is made from the chipping of tree and landscape prunings. Mulch is material placed on the soil surface for the purpose of protecting the soil and plant roots. Not only do organic mulches add a decorative natural appearance to the landscape, they also provide many landscape benefits.



- **Helps retain soil moisture.** Mulch helps soil retain moisture and reduces water evaporation caused by wind and hot sun.
- **Reduces soil temperature extremes.** An application of mulch acts as an insulating blanket to help avoid extreme temperature fluctuations.
- **Reduces weed growth.** When the site has been properly prepared, mulching reduces weed growth.
- **Saves time in landscape maintenance.** Place mulch under and between plants in tree and shrub beds, border plantings, hedges, rose beds and fruit orchards. By replacing grass with mulch, mowing and watering time is cut dramatically.
- **Prevents direct contact with soil.** Mulch prevents vegetables from making soil contact, thus helps to reduce rot.
- **Prevents heavy rain damage.** Mulching prevents soil erosion. It permits water to seep slowly beneath the protective covering.
- **Increases survival of new trees.** Not only do mulches keep the soil cool and moist, they also keep the lawn mower and weed trimmer from damaging young bark and killing trees.
- **Gives a natural look.** A few fallen leaves in a planting bed with a wood chip mulch gives your landscape the natural beauty of a forest floor.

Free Woods Chips from City of Lincoln

The City of Lincoln has limited quantities of wood chip mulch on a first-come, first-served basis. Contact the Lincoln Recycling Office at 441-8215 for more information.

- Wood chip mulch is available at the N. 48th St. Transfer Station, located at 5101 N. 48th Street, (any vehicle) and the Bluff Road Landfill, located at Highway 77 and Bluff Road, (pickups and trailers only). There is a charge of \$5 per cubic yard. City personnel will load woodchips into open pickups or trailers.
- Individuals may also self-load wood chips at no charge at the Recycling Drop-off Site (1/2 mile north of Superior Street on North 48th Street)
- Delivery of wood chips within a 50-mile radius of the Bluff Road Landfill is available for a fee.

Compost Excellent Tool to Correct Soil Erosion

A recent study demonstrated the most effective approach to reduce storm water runoff and sediment erosion on slopes is to use a compost blanket approximately two-inches thick.

From April, 2004 through June 2005, the City of Lincoln and the University of Nebraska–Lincoln (UNL) conducted an erosion study comparing compost to traditional approaches of straw blankets and silt fences.

About the Study

Six test plots were constructed on a slope of 3 to 1. This is a fairly steep slope that rises about 33 feet in a horizontal distance of one hundred feet. The amount of rainfall during the study was tracked as well as the amount of run-off from each test plot during the period of the study.

Each test plot was seeded with a fescue-blend grass seed typically used by seeding contractors. The health and

vigor of the established turf was greater in the compost amended plots than those with straw mats. The organic material in compost amended turf was almost five times more than it was for straw mat plots. This healthier turf is able to filter storm water and pollutants and hold soil better preventing sediment erosion.

The Results

This study demonstrated the use of compost as an effective approach to minimize soil erosion and stormwater run-off. In fact, the study showed applying a two-inch blanket of compost would reduce soil loss by 99.8% compared to bare soil. When compared to the traditional erosion control practice of using a straw mat and silt fence, the compost blanket decreased the amount of sediment running off on the test plot by 81%. Use of the compost blanket increased water infiltration by up to 99.3% compared to a straw mat. In other

words, only one percent of the rainfall ran off the compost blanket as opposed to 24% for the straw mat.

Compost can also be incorporated into the soil. However, it is recommended a filter berm be established at the base of any slope to minimize soil erosion prior to grass seed germination. A silt fence can be used if incorporating the compost into the soil. To produce the healthiest soil possible, soil tests can be conducted to determine the optimum application of compost.

How Compost Blankets Work

When raindrops hit soil with the vegetation removed, they dislodge and detach soil particles. This is called "splash erosion." If there is more rainfall than the ground can absorb; the resulting run-off carries the detached soil particles away. The compost blanket buffers the un-vegetated soil to help it

receive moisture, increases water infiltration into the soil and prevents the run-off velocities that carry sediment away. After vegetation growth, the compost provides both nutrients and additional organic matter to hold moisture in the soil.

An economic analysis conducted by UNL suggests a compost blanket would cost about five percent more than the traditional approach of using straw mats and silt fences. The cost analysis does not include additional seeding likely to be required in subsequent years for non-compost amended soils.

For More Information

To obtain more information on the use of compost for erosion control projects, contact the Lower Platte South Natural Resources District, 476-2729; the City of Lincoln Watershed Management Division, 441-4959 or Solid Waste Operations, 441-7043.