How To Use COMPOST *to Establish or Revitalize* Your Lawn and Garden

Gardening and lawn care can be frustrating when plants and grass don't grow well, leaving many people to wonder what they're doing wrong. *The secret to beautiful, lush plants is the soil.*

Urban environments and housing developments often have soils that are heavy textured or high in clay content. Such soils can be poor environments for growing flowers, vegetables and turf. Working compost into heavy textured soils aids water drainage and increases the amount of air that plant roots receive. When roots grow deeper, plants grow bigger, greener and healthier.

Ready-made compost from the Landscape Recycling Center is affordable, and can be used to grow the lawn or garden of your dreams!

How organic matter such as compost improves soil:

- Supplies and helps retain some nutrients so they remain available to the plant even in alkaline or high pH soils.
- Improves soil structure to provide air and water spaces. Clay particles are very small and are held tightly together. Small pore spaces favor water retention over air. Plant roots must have air to survive.
- Reduces soil compaction and runoff.
- Improves water holding capacity and drought resistance of sandy or coarse textured soils.
- Improves ability of plant roots to penetrate soil.
- Serves as a source of food and energy for microbes, which help in nutrient cycling and disease and insect resistance.
- Reduces negative effects of environmental pollutants.
- Adds important critters including fungi and bacteria that help to maximize a plant's ability to find nutrients and water in the soil.

New Lawns

It can be difficult to get a lawn started, especially in subdivisions where the topsoil has been removed and the remaining clay has been compacted during construction. Compost can help to aggregate small clay particles, thereby improving the soil structure. It can also improve the soil's ability to provide vital nutrients to the soil environment. Incorporate 1 to 3 inches of compost into the top 6 inches of soil. Sod or seed can then be placed on top of the amended soil. Add water, and your new lawn will grow fuller and be better able to withstand the changing seasons.

Existing Lawns

If your lawn is already established, but it isn't as healthy as you would like, compost can still revitalize turf grass in poor soil areas. The best method is to core aerify the existing lawn. Then use a drop spreader to spread a thin layer, about 1/2 inch or less, of screened compost on top of the turf. The holes produced in core aerifying and the compost will help alleviate compaction and thatch. The compost will filter into the holes and help fertilize the lawn.

Vegetable Gardens

Vegetables benefit from using plenty of compost. To grow healthy plants, spread 1 to 3 inches of compost on top of the soil in the fall. Leave it as a winter cover, till it into the soil in the spring, and your vegetable garden will be ready for planting. Do this annually, and after several years, you may not need to till every year! You can also place a handful of compost in each hole while planting the vegetables.

Flower Beds

Compost can also be used in flowerbeds and window boxes. When using it in flowerbeds, you can apply 1 to 3 inches of compost over the soil surface in the fall and till it into the soil the following spring. If you are applying compost in the spring prior to planting flowers, loosen the top 4 to 6 inches of the soil and mix in a 1-inch layer of compost. Then you can place wood mulch on top of the amended soil to control weeds and conserve moisture.

Potted Plants

Potted plants and window box flowers flourish when compost is used to create an organic potting soil. If you are going to make your own compost-based potting mix, make sure you are using stable, high quality compost. Plants grown in compost-based potting mixes can experience problems if the pH, soluble salts or biological activity is too high. If you are unsure of the stability of your compost, get a soil test. Once you have determined that the compost you plan to use is suitable for potting mixes, you can add anywhere from 20 to 40% by volume into a mix; the remainder of the mix can contain either peat or loam soil blended in equal parts with either perlite or vermiculite.

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Landscape Recycling Center
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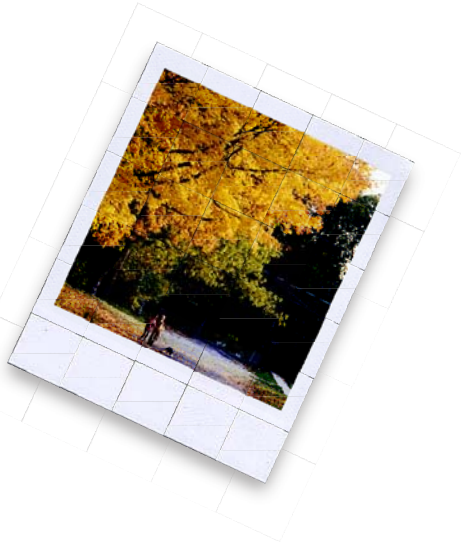

How to conduct a soil drainage test

Dig a hole 1 to 2 feet deep, and add just enough gravel to cover the bottom of the hole. Completely fill the hole with water, then allow this water to drain entirely and soak for 24 hours. After that time has passed, fill the hole with water until it is 12 inches deep and observe the rate of drainage. The amount of water that drains in an hour indicates how compacted your soil is. If 1 inch of water drains in one hour, your soil drains properly. If 1/2 inch of drainage occurs in one hour, the soil is slightly compacted. If 1/4 inch of drainage occurs in one hour, the soil is moderately compacted. If less than 1/4 inch of water drains in one hour, the soil is severely compacted.

Some information courtesy of University of Illinois Extension and *Urban Soil in Landscape Design* by Phillip Craul.

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Existing Trees and Shrubs

For existing trees and shrubs, add a 1-inch layer of compost around the plants and cover with mulch, keeping the mulch away from the base of the plants. Do this in late spring to improve moisture retention, aeration and fertility of the surrounding soil over the growing season.

New Trees and Shrubs

Soils that are low in organic matter (such as clay or sand) tend to compact easily and can present problems for young trees and shrubs. The methods described below explain how to use compost to amend compacted soils and encourage root penetration. If you aren't sure to what degree your soil is compacted, refer to the soil drainage test instructions (see left).

Planting in Compacted Soils

- **Slightly Compacted**

  If the soil is slightly compacted, trees can have the opportunity to grow stronger if you amend the soil with compost. Dig the width of the tree planting hole 3 times wider than the diameter of the root ball. For depth, dig no deeper than the height of the root ball so the root ball sits on firm, undisturbed soil and the top of the root ball is no deeper than ground level. Use a ratio of 1/3 part compost to 2/3 parts existing soil, and backfill the hole with this mixture.

- **Moderately Compacted**

  When planting a tree in moderately compacted soil, some extra excavation can allow roots to spread out and provide a strong base. Once the tree is planted, dig 8 trenches around the tree that extend 3 to 4 feet from the hole. The trenches should be as deep as the hole, but not any wider than the spade or shovel you use. Once the trenches are dug, add compost to the soil before backfilling, using 1/3 part compost to 2/3 parts existing soil. The trenches will create paths for the roots to follow, and stronger roots mean hardier trees.

- **Very Compacted**

  If your soil is severely compacted, such as in new subdivisions where heavy building equipment has driven over the soil, consider creating a French drain in addition to the wagon wheel trenches described above. To create a French drain, dig the hole for the tree. Before planting the tree, use a posthole digger at the bottom of the hole to dig down further. The goal is to dig deep enough to reach looser soil below the heavy clay layer. Fill this smaller hole with pea gravel and cover this area with landscape fabric or a weed barrier. Then plant the tree above the new French drain. Now the water can drain out below the highly compacted soil. When backfilling the hole after the tree has been placed, use a 1/4 part compost to 3/4 parts soil ratio. Adding a smaller amount of compost in relation to the existing soil will help the tree roots extend further by minimizing the transition from compacted soil to amended soil.

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Don't have time to make your own compost? We can help!

At LRC, we turn grass clippings, brush and plant cuttings into products that can be used to revitalize soils and beautify local landscapes. We offer the following products:

• Compost • Mulch • Firewood

For additional information and site hours, please call 217-344-LEAF or 217-384-2393. Or visit us on the web at www.city.urbana.il.us/lrc.

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