



# USING COMPOST IN UTAH TURF APPLICATIONS

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Compost is a wonderful soil amendment with some fertilizer value. It is derived from the natural decomposition of leaves, plants, and animal manures by microorganisms. The end result of this process is a dark, crumbly, earthy-smelling material called compost. When applied to soil, compost increases organic matter content, improves soil structure, and provides nutrients for plant growth.

Not all composts are alike. Composts originate from a variety of sources including yard and garden trimmings, biosolids, and animal manures. Because the raw materials that go into a compost pile are varied, the quality of the resulting compost varies. Generally, if compost resembles soil, it can be used in potting mixes, as a garden soil amendment, and in turf applications. If the compost is light colored and composed of larger amounts of wood chips, bark or straw, it should be used as a mulch. For more information on using composts as a mulch, refer to the fact sheet *Using Mulches in Utah Landscapes and Gardens*.

## **BENEFITS OF USING COMPOST**

Compost can improve turf performance by improving the aeration and drainage of heavy clays, increasing the water-holding capacity of sandy soils, reducing surface crusting and compaction, and increasing soil fertility levels. These improvements promote faster turf establishment and better rooting, improved stand quality, and reduced fertilizer needs.

## **COMPOST QUALITY**

Compost should look and smell earthy when finished—even when wet. Compost quality is generally based on particle size, pH, carbon-to-nitrogen ratio, concentration of soluble salts, and presence of weed seeds, heavy metals, and foreign objects. Although Utah has not mandated standards for compost quality, Table 1 provides general guidelines for various uses of compost.

## **APPLICATION METHODS**

There are two basic methods of applying compost to turf. Soil incorporation is possible when establishing a new lawn, while broadcasting is used on established stands of grass.

**Soil Incorporation:** Appropriate rates range between 3 cubic yards per 1,000 square feet (~1" layer) to 6 cubic yards per 1,000 square feet (~2" layer). Use the higher rate for soils with high sand or clay content. Prior to applying the compost, prepare the soil by tilling and grading the site. Following application, avoid a layering effect by incorporating the compost as deep as possible with a tiller.

Supplemental fertilizers may be needed for vigorous growth depending on the origin of the compost. High nitrogen-containing raw materials, like biosolids and animal manures, may supply adequate nitrogen for turf establishment. However, composts made from yard and garden trimmings may need supplemental starter fertilizer for vigorous seedling growth.

**Broadcast Application to Established Turf:** To apply compost to established turf, prepare the lawn by making one to two passes with a hollow-tine aerator. Apply compost to a depth of ¼ to ½ inch. Most composts are light and bulky. Therefore, use a fertilizer spreader with a large hopper to apply the compost. For large areas, spreaders can be modified with conveyor belts or larger hoppers. Tractor-mounted fertilizer spreaders can also be used for large area treatment. For smaller areas, apply compost by hand in a star-shaped pattern, then rake out to about ¼ to ½ inch depth. Work compost into the lawn using a heavy drag mat or rake to break-up the aeration cores and evenly distribute the soil and compost.

The best time to apply compost to established turf is during cool, moist periods when the grass is actively growing (i.e., during the spring or fall). Compost applications to established turf should only be made once per year. Avoid repeated applications and applications without incorporation. This may result in the build-up of an organic layer on the surface which can harbor disease and restrict rooting.

Remember: when using compost in a lawn, the nutrients that were once discarded are now recycled. It's the ultimate recycling action!

**Table 1. Compost quality guidelines based on use.**

Characteristics	Potting Mixes	Soil Amendment	Top Dressing
Color	Dark brown to black	Dark brown to black	Should resemble dark topsoil, with a light, crumbly structure
Odor	Should have good earthy odor	Should have no objectionable odor	Should have earthy aroma without objectionable odors
Particle Size	Less than ½ inch	Less than ½ inch	Less than ¼ inch
pH	5.0 - 7.6	5.0 - 8.5	5.0 - 8.0
Soluble Salt Concentration, mmhos/cm or dS/m	Less than 2.5	Less than 20	Less than 6
Carbon-to-Nitrogen Ratio	Less than 25:1	Less than 50:1	Less than 30:1

Other Related Fact Sheets:

- ▶ Backyard Composting in Utah
- ▶ Using Compost in Utah Gardens
- ▶ Using Mulches in Utah Landscapes & Gardens

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