



Compost Use Guidelines¹: Planting Bed Establishment with Compost

Soil Amendment for the Establishment of Planting Beds (seed, seedlings, or woody plants)

One of the most popular uses for compost products by horticultural professionals and homeowners is amending planting beds for the establishment of various food and ornamental plants. Plant growth benefits are typically substantial when using compost because existing soils around homes and commercial sites are typically of poor quality due to the practice of soil stripping before construction. The addition of compost improves the physical structure of the soil, which in turn, promotes root development and heightens a plant's resistance to stress. Compost also adds organic matter, beneficial microbes, and vital nutrients, all of which store and maintain soil fertility.

Preferred Compost Characteristics*² Planting Bed Establishment

Parameter	Value Range
pH.....	5.5 - 8.0
Moisture Content ..	35% - 55%
Particle Size.....	Pass through 1-inch screen or smaller.
Stability	Stable to highly stable, thereby providing nutrients for plant growth
Maturity/Growth.....	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported; 2.5 dS/m (mmhos/cm) or less is the preferred salt content for the soil/compost blend

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost should also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety regulations.

What has field experience with compost shown us?

- ④ Lower application rates can be used when composts possessing higher organic matter contents are used or where soil quality is moderate. Excessively coarse-textured (sandy) or fine-textured (clay, clay loam) soils will require higher application rates. Soil test results are helpful in establishing application rates.
- ④ Lower compost application rates may be necessary for salt-sensitive crops such as geraniums or where composts with higher salt levels are used. The soluble salt concentration of the amended soil should not exceed approximately 1.25 dS/m where seeds, young seedlings, or salt-sensitive crops are to be planted. Although salt-related injury is not common, thorough watering at the time of planting can further reduce potential problems. Care should be given when using composts possessing a high pH near acid-loving species.

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About the USCC: The United States Composting Council (USCC) is a national not-for-profit organization dedicated to the development, expansion and promotion of the composting industry. For more information visit www.compostingcouncil.org

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¹ Excerpted from the Field Guide to Compost Use, ©2001•The US Composting Council

² More in-depth information regarding compost characteristics can be found in the USCC Factsheet *Compost Characteristics & Parameters*

Instructions for Compost Used as a Soil Amendment for Planting Bed Establishment

Step 1:



Evenly apply compost at a rate of 135-270 cubic yards per acre (1-2 inch layer) or 3-6 cubic yards per 1,000 square feet. Rates range from 90-400 cubic yard (2/3-3 inch layer) or 2-9 cubic yards per 1,000 square feet. Application rates will vary depending upon soil conditions, climate, compost characteristics, and plant species to be established

Step 2:



Apply compost by hand, using rakes or shovels, or mechanically with a front-end loader, grading blade, manure spreader, York rake, or other appropriate equipment

Step 3:



Incorporate the compost to a depth of 6-8 inches by hand or mechanically using a rototiller or other appropriate equipment until the compost is uniformly mixed.

Step 4:



Establish a smooth planting bed by raking or dragging the soil surface.

Step 5:



Plant transplants or woody plants into the amended soil and firm them in place. Seeds should be applied and lightly incorporated into the soil surface using a rake.

Step 6:



Water to assure proper establishment and fertilize as necessary.³

³ Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.