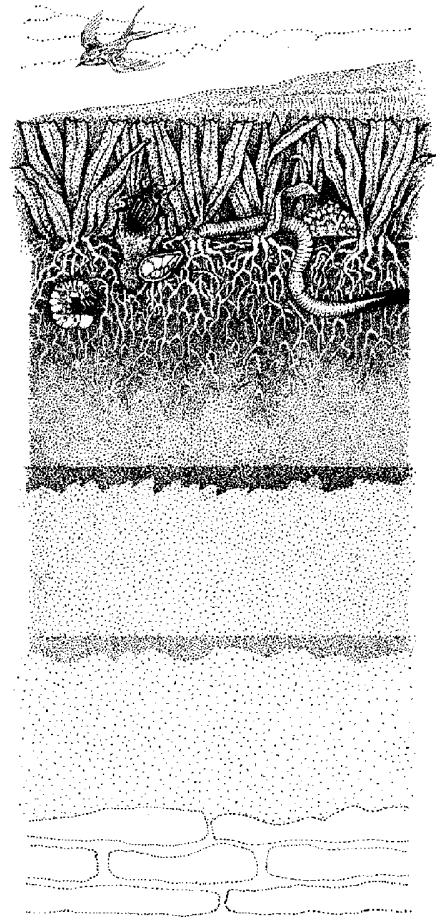


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Composts As Soil Amendments

Compost is the product of biological decomposition of organic material in wastes under controlled conditions. An amendment is any material applied which alters the physical or chemical properties of a soil. Can compost be a suitable soil amendment when growing turfgrass? This is a question receiving more attention from turfgrass managers and researchers as alternatives to peat are sought and commercial production of composts increases. ■

Effect of Soil Characteristics

The ability of a soil to support a healthy stand of turfgrass is greatly influenced by inherent physical and chemical properties of the soil.

To properly manage turfgrass, it is important to understand soil characteristics and how they can affect growth and quality. Poor soil properties can lead to many problems, including inadequate drainage, reduced nutrient availability, soil compaction, and decreased microbial activity. This is particularly true of high traffic turf areas like golf greens and athletic fields which tend to be intensively used and managed.

When the physical shortcomings of a soil inhibit grass growth and ultimately the intended use of a turf area, modification by the addition of soil amendments may be called for to maintain adequate levels of oxygen, water, and nutrients. The appropriate amendment can improve plant growth, provide a better or safer playing surface, and reduce turf management problems. In a

sandy soil, an amendment can increase the water holding capacity and ability to retain nutrients. On the other hand, a soil with too much clay can benefit from the addition of an amendment in order to reduce compaction and increase soil porosity.

The most common organic material used for soil modification is peat. Coarse-textured peat (such as sphagnum peat) can be used to modify fine textured soils and a finer, more decomposed peat (such as reed sedge or peat humus) is often used to modify coarser-textured soils. A number of benefits from the addition of peat have been recognized. Sandy soils amended with peat exhibit increased moisture holding capacity and fine-textured soils have better infiltration. Peat-modified soils have improved aeration and root penetration as well as increased nutrient retention and availability. Although peats are the

This Times

1. *Composts as Soil Amendments*
2. *Short Cutts*
3. *Scanning the Journals*
5. *PRO-TECH*
8. *Topdressing*
10. *Microbiology of Turfgrass Soils*
14. *Winterizing Your Sprayer*
15. *Reducing Reliance on Pesticides*
16. *Kentucky Bluegrass*

continued on page 6