A Comparison of Natural Organic Fertilizers

The use of natural organic fertilizers is becoming more popular in our industry. The release of nutrients from these fertilizers is dependent on microbial breakdown of the organic fertilizer. This paper reported on a study that looked at the effect of the addition of a microbial inoculum (provided in the fertilizer) on nutrient release. Pots of tall fescue and bermudagrass were treated with Ringers Turf Restore, with and without the inoculum, and with urea. Urea treated pots had much greater growth rates and nitrogen recoveries (in clippings) than the inoculated and uninoculated organic fertilizers. The Turf Restore with the inoculant did not enhance turf growth compared to the uninoculated material. Also, the presence of inoculum did not impact infection with Rhizoctonia spp.

(From: C. H. Peacock and P. F. Daniel, 1992. A Comparison of Turfgrass Response to Biologically Amended Fertilizers. HortScience 27(8): 883-884.)

Irrigation of Turfgrass With Effluent

Sewage effluent and other secondary waters have become important sources of irrigation water in some parts of the country. Limited supplies of potable water in New York may force some to look at effluent as an irrigation source in this state as well. It is important, then, that we know the effects of the use of effluent on turfgrass growth. This paper reports on a 3 year study whereby turf was irrigated with sewage effluent. The effects of the water on soil quality was investigated. The paper reported that the soil pH was not greatly influenced by effluent use. Three years of effluent use resulted in slight increases in salts (electrical conductivity), sodium, phosphorus, and potassium when compared to irrigation with potable water. The concentrations of iron, zinc, manganese, and copper were all found within normal ranges. The authors concluded that with the effluent water they used, they found no detrimental effects from use for three years.

(From: C. F. Mancino and I. L. Pepper, 1992. Irrigation of Turfgrass With Secondary Sewage Effluent: Soil Quality. Agronomy Journal 84: 650-654.)

Organic Sources for Sports Turf Rootzone Mixes

Peats and other organic materials are commonly used in rootzone mixes for sports fields and putting greens. It is normally a component of a mix with sand, and provides greater moisture and nutrient holding abilities of the rootzone mix. We know little, however, about characterizing peats for these purposes. This paper reported on a study that looked at the influence of peat on moisture retention in a rootzone mix. The primary characteristics of the peat that were evaluated were percent organic matter (of the peat) and fiber content. The results showed that peats with fiber contents >45%, such as coarse sphagnums, may be too coarse. These peats increased the moisture holding capacity of the mix, but much of that water was held in the peat too tightly to be available to the plants. Likewise, peats with fiber contents less than 20%, as in mucks, contained to many fine particles that slowed down infiltration rates.

(From: E. L. McCoy, 1992. Quantitative Physical Assessment of Organic Materials Used in Sports Turf Rootzone Mixes. Agronomy Journal 84: 375-381.)

Turfgrass Information File

If you need information, the turfgrass information file (TGIF) is a tremendous source. Stationed at the Michigan State University Libraries, TGIF is the only on-line library service exclusively for the turfgrass industry. Thousands of research and popular articles in many topics can be accessed through TGIF. All you need is a computer and modem, and pay a small annual fee for access to this valuable resource. If you don't have a computer, the staff at the TGIF Center will be happy to perform a search for you for a nominal fee.

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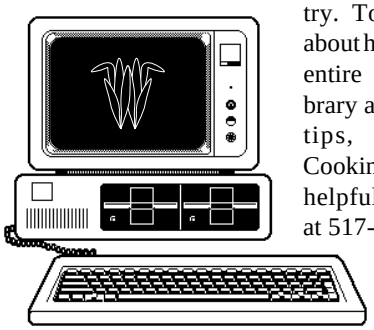

Scanning the Journals

A review of current journal articles

Sewage effluent and other secondary waters have become important sources of irrigation water. The authors concluded that no detrimental effects were found after three years' use.

Peats with fiber contents >45%, such as coarse sphagnaums, increased the moisture holding capacity of the mix, but much of the water was unavailable to the plants.