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Mid-Atlantic Newsletter

PEAT MOSS

Doing any landscaping this fall? If so you probably will be purchasing some peat moss. Suffice to say peat moss is available in different forms commonly called humus; but how often do we specify a particular kind of peat? Before you place this fall's order take time to evaluate what is available as compared to your special golf course needs.

The peats are desirable forms of organic matter. The best ones are the residues of marsh plants which have been preserved under water. The type of decomposition to which they have been subjected leaves them in a form that is highly resistant to further decay. As a result their beneficial effects on the soil extend over comparatively long periods.

Peats vary considerably in structure, stage of decomposition, capacity to absorb water, and organic-matter content. The moisture-absorptive capacity and organic-matter content are the most important items from the standpoint of effects upon physical soil properties. Peat should absorb four to five times its dry weight of water, and the organic-matter content should be 90% or more by weight on a dry-matter basis.

Commercial peats can be grouped into four main classes: 1) Raw Peats, 2) Cultivated Peats, 3) Moss Peats, and 4) Sedimentary Peats.

Raw peat is the material just as it comes from the bed, which has been processed by drying, shredding or pulverizing, and screening. Cultivated peat is raw peat that has been tilled to break it up mechanically and to quicken the rate of decay. Cultivation stimulates the development of organisms responsible for decomposition. In peat of this type some of the more readily decomposable materials have been lost and

the residue is more resistant to further breakdown. The commercial material is in excellent physical condition for thorough mixing into the soil. Its commercial value depends upon its moisture content, its capacity to absorb water, and the amount of actual organic matter which it contains.

The moss peat is composed principally of sphagnum mosses which have undergone partial decay. It is finely fibrous and very light and fluffy. Unless well pulverized, it is in poor condition for mixing into soils. Because of its higher rate of decomposition and its extremely light spongy character it is not so suitable a soil conditioner for turf use as the raw and cultivated peats.

The sedimentary peats have little value for soil conditioning. They are composed of high percentages of very fine particles of organic matter mixed with silt and clay, which have been deposited in shallow lakes and ponds. They are often sticky and plastic when wet and highly compact and hard when dry.

Rotted manure, spent mushroom soil, charcoal, sawdust, buckwheat hulls, fused cinder, peanut hulls, and by-products like tannery sludge, sewage sludge, ground cocoa shells, and similar materials which may be available locally can be used as supplementary sources of organic matter. Their general character and rates of decay must be considered in estimating their value. For a material to be considered of value of organic matter it must contain porosity and a high degree of stability. Manures, for example, consist of 70-80% moisture and 20-30% dry matter. They decay rapidly and within a comparatively short time only about 2-3% of the original weight of material remains in the soil as humus. In the preparation of topdressing material, mushroom soil is valuable for use as the soil portion of the mixture, but does not supply sufficient humus to justify its use to increase solid organic matter permanently. Most of the other organic by-product materials, such as sewage and tannery sludges, are of the same general character as manure. They break down rapidly and leave relatively little humus for permanent improvement.

Attempts to use various by-products hulls such as cocoa shells and hulls from rice, peanuts, and buckwheat as soil conditioners have not been very satisfactory, unless they have been composted first. These materials are light and fluffy and are difficult to mix into the soil uniformly.

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