

UTELITE E-SOIL®

AMENDING SOILS FOR TURF

Golf Green

Golf Tee Boxes

Golf Fairways

Soccer Fields

Football Fields

Softball Fields

Baseball Fields

Athletic Fields

City Parks

Lawns

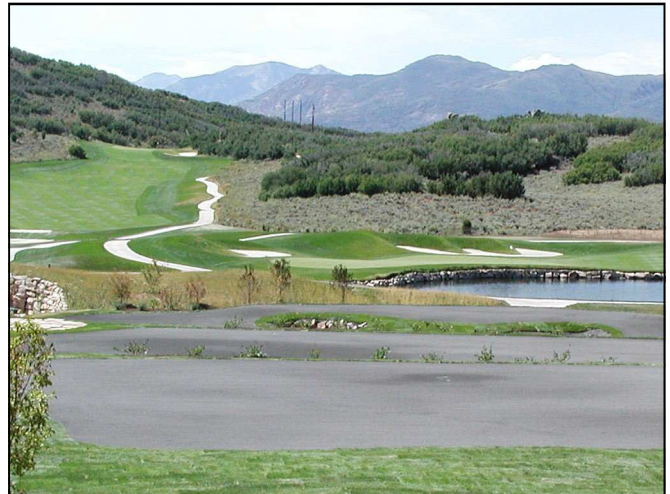
Fire Lanes



YOUR ROOT SOLUTION!

INTRODUCTION

With the advent of sports turf, golf greens and professional lawn care, the science of turf grass management has taken a giant step forward. All healthy turf has one thing in common: *a good root system*. Roots that can move freely through the soil, help grass plants establish and recover more quickly than those that are placed in compacted and poorly drained soils. Compacted soils force roots to grow very near the soil surface. This greatly reduces drought resistance and increases the possibility of diseases from poor drainage. Sandy soils can have adequate drainage, but often require additional applications of fertilizer and water to compensate for its limited ability to retain nutrients and moisture.



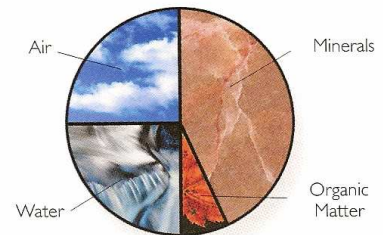
Renovated Green with Utelite E-Soil

Soils properly amended with Utelite E-Soil will yield strong, healthy turf that requires less maintenance and recovers more quickly from active use. It not only protects your investment, it enhances it.

A GOOD SOIL PROFILE

Soil is a complex mixture of minerals, organic matter, air and water. It is necessary to maintain a careful balance of these elements to establish a good soil profile. Generally speaking, a good soil profile is approximately 5% organic matter, 25% air, 25% water and 45% mineral matter. When soils become compacted the profile becomes unbalanced as a result of changes in the soil structure. Solid particles are pressed together eliminating space for the water and air. With less pore space, soils become too dense for the movement of water and for the exchange of air and nutrients. With this compacted soil condition, the favorable environment for the beneficial microbial activity necessary for a healthy growing medium is lost.

Four Principal Components of soil



SOIL AMENDMENTS

Providing adequate drainage, reducing nutrient loss, improving moisture retention, enhancing soil resiliency and increasing resistance to compaction, a balanced soil can be achieved. Organic amendments are essential for healthy balanced soils, however the addition of only organic amendments to compacted or heavy clay soils can take many years to effectively reverse the effects of compaction. The combination of organic materials and Utelite E-Soil as an amendment has proved to be an effective solution with very long-term results.

Historically, turf managers added grit or sand to the soil to help aerate. However, over time the soil becomes compacted around these solid particles, the pore space is reduced, and the air supply to the roots is cut off. Some sands can leach minerals into the soil and affect nutrient balance. In some areas, certain sands can degrade and breakdown over a relatively short amount of time. Other products such as perlite, vermiculite, partially calcined clays are marketed to aerate soil. These additives provide short term results but need to continually be applied because they break down over time, crush, or get carried away by wind or water. **Utelite E-Soil can provide an essentially permanent, single application solution.**



Utelite E-Soil Soil Conditioner

TURF ESTABLISHMENT

NEW CONSTRUCTION

In the case of athletic fields, golf greens and tee boxes or other similar turf surfaces, Utelite E-Soil is used in place of typical sand based soils or combined with the root zone soil to improve its characteristics. For that type of turf construction, a very fine gradation of Utelite E-Soil is combined with peat moss or other organic component to meet soil design specifications.

When existing soil is to be used, Utelite E-Soil is added as a soil amendment to improve drainage, aeration or reduce compaction. Utelite E-Soil plays a critical role when establishing turf on heavy clay soils, where root development can be inhibited due to the lack of drainage and aeration in the root zone. A minus 1/4 inch Utelite E-Soil material is normally used for this application.

Utelite E-Soil is best incorporated into the soil before seeding or sod placement. A 1-3 inch layer of Utelite E-Soil is spread evenly over the soil surface. *Utelite E-Soil depth can vary depending on the soil type and to what depth you are trying to modify the soil.* The addition of 1/2– 1 inch layer of organic matter, preferably a good compost, at this time is also recommended. Apply the recommended rate of fertilizer, along with any other required amendments such as lime or sulfur. With everything applied to the soil surface, till or work it all into the soil to a depth of 6-8 inches. With Utelite E-Soil properly incorporated into the soil profile, it is ready to smooth and place seed or sod.

If the soil is being mixed at an alternative location and brought to the project site as needed, specify that the soil should be mixed with 20-30% Utelite E-Soil by volume.

TOPDRESSING EXISTING TURF

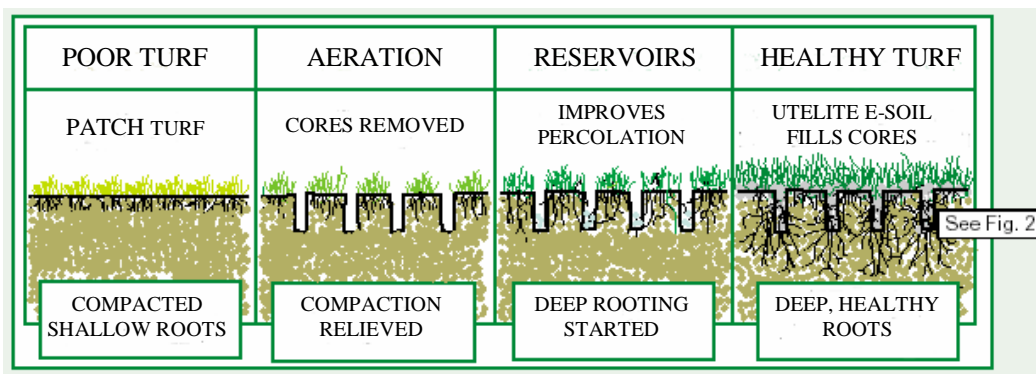


Figure 1

Best Method: Apply a 1/4-1/2-inch uniform layer of Utelite E-Soil onto a recently-mowed and aerated surface. (In the absence of a topdressing machine, the material can be applied using a standard fertilizer spreader.) The applied material can then be raked into the 2-4-inch cores to become a permanent addition to the soil profile.

Alternative Method: Apply a 1/4-1/2-inch uniform layer of Utelite E-Soil onto a recently-mowed and closely-cropped turf. Though not as effective as when combined with aeration; the material will eventually work into the thatch layer and ultimately into the soil profile.

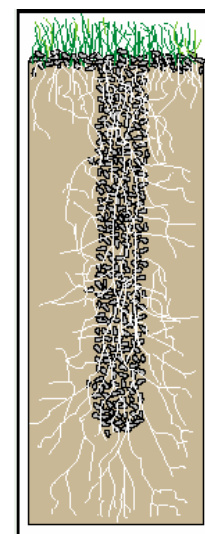


Figure 2

TURF PAVERS AND FIRE LANES

Turf surfaces are often used for temporary parking lots for sporting events, concerts and other entertainment activities. Turf surfaces often play host to outdoor events with heavy foot traffic. Many building codes now require fire lanes that will allow access by heavy fire trucks to the edges of buildings. Typically turf does not recover quickly from compaction by vehicles, machinery or heavy foot traffic. Turf maintenance practices under those conditions can be difficult.

Utelite E-Soil is used to create a stable root zone that will sustain a healthy turf surface while assuring support for vehicular use or heavy foot traffic. In areas with occasional use, a 3/8 graded Utelite E-Soil material is combined with organic matter and/or sandy loam. Areas under continuous use combine current paving products with Utelite E-Soil to form a stable soil.

TURF ESTABLISHMENT OVER STRUCTURES

As modern building construction moves toward sustainable development, green space i.e. parks, trees, trails and gardens, is increasingly becoming an important part. In highly developed areas where green space is usually limited, developers, designers and planners are starting to transform developed areas into green space. Rooftop gardens and plantings over structures are a viable option. Those designs follow traditional landscapes with flowers, trees, and turf. However, soil for those types of designs is different from that in other settings. Typically, a soil for plantings over structures has special weight and drainage requirements. Utelite E-Soil is used to create lightweight soils to support turf and other plant species that will be established on structures.



For additional information on Utelite E-Soil® products, please contact:

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