When A Sand is Not Just Sand

Imagine spending $300,000 to construct a new sports field or 18 golf greens out of sand, and then find that they don’t drain or are extremely hard. Is this possible? You bet it is! Unfortunately, it happens far too often.

Sports and golf turf areas are increasingly being built with sands, or soils modified with large amounts of sand. Sands with uniform particle size will resist compaction, provide excellent surface drainage and soil aeration. Selecting the proper sand, however, is most important to achieve these characteristics. I often remind people that sand is also used in concrete, mortar, and bricks.

What Sands Are Best?

Sand is a loose granular material that formed through the weathering of rock. A technical definition of sand is a soil particle between 2 and 0.05 mm in diameter. Sands found in New York State can be either quartz calcareous. Quartz or sand is generally preferred as a growth medium because it is chemically inert. The chemical and physical makeup of turf areas constructed with quartz sands should change very little through time. Natural deposits of quartz sands can be found near Rome, NY, much of the Adirondacks, the Catskills, and Long Island. Quartz sands are also available from several out of state sources (Table 2).

More common in New York are the calcareous sands. Formed from limestone rock, calcareous sands may contain as much as 15% free calcium carbonate (lime). These sands will therefore have a high pH, and are well buffered from any attempts to change pH. Calcareous sands are very chemically active, and very prone to further weathering. Despite these drawbacks, many successful installations have been made with calcareous sands.

The particle size and uniformity of a sand are of greater immediate importance than the chemical makeup. Many terms are used to describe sands, including masonry, block, plaster, construction, trap, and others. These terms are descriptive of the intended use of the sand, but say nothing of its particle size or uniformity. To

continued on page 4