

# CHALKBOARD

## TIPS FROM THE PROS

### SAND TOPDRESSING IN THE NORTHEAST

By James Kelsey, Partac Peat Corp.

It seems that every few years someone writes an article "rediscovering" sand for topdressing fine sports turf. Each time, turf specialists have to remind turf managers about the extra care needed for turf regularly topdressed with straight sand. While sand topdressing is better than no topdressing, it is not preferable to a topdressing mix unless the root zone was constructed of straight sand.

In the Northeast, where heat-treated, commercially-prepared topdressing has been available since the '20s, the value of a uniform mix of sand, loam and peat is readily understood.

Topdressing, as it breaks down thatch and smooths your playing surface, should at the same time be creating a growing zone for turf comparable or better than your original construction mix. Applying a thin layer of sand to turf that has never been topdressed before will help control thatch. But over time, sand topdressing these areas will build up a droughty growing zone with turf that must be constantly "babysat," as Dr. John Hall at Virginia Polytechnic Institute has demonstrated repeatedly.

Topdressing with straight sand removes the turf manager's margin of error. Turf grown in sand is exposed to dangers connected with excessive nutrient leaching, lower microbial activity, dry spots, insufficient moisture reserve, and susceptibility to layering. This type of layering has been linked to current problems with the waterlogged, subsurface layers known as black layers.

In the Northeast, there are two main types of commercially-prepared topdressings available. One is patterned after specifications from Rutgers University. The other is based upon United States Golf Association (USGA) specs. Both have high sand content but contain soil and peat to avoid the problems mentioned above.

The USGA spec is generally 93 percent sand by analysis (70-80 percent sand by volume) with no more than five percent silt and three percent clay. The Rutgers' spec is 70-80 percent sand, 5-15 percent silt and 5-8 percent clay by analysis (about 50 percent sand by volume). Both specifications call for most of the sand particles to be in the .25mm to 1mm size range.

The differences between these two specs are significant depending upon the original construction of your greens, tees or athletic fields. The USGA spec emphasizes very low silt and clay content to achieve high porosity and water infiltration. This mix was



Germination rates can vary greatly in different topdressing mixes. The Rutgers' mix (center-front) germinated faster than the USGA mix called tee mix. Germination was slowest in sand.

designed to be compatible with the root zone soil mix of golf greens constructed to USGA specifications. USGA green construction specifications were developed in 1960 and revised in 1973 to provide uniform drainage and maximum protection against compaction.

The Rutgers topdressing is used on greens constructed to more traditional specifications. The somewhat higher loam/peat content makes it a better germinating medium for overseeding. Both Rutgers and USGA topdressing mixes are being used on athletic fields in the Northeast, as well as grass tennis courts and bowling greens.

Another difference between the two mixes is heat treating. Heating the mix kills weed seeds, insects, fungi and nematodes and dries it out for screening. During the heating process a significant portion of the silt and clay is bound to the sand particles to form water-stable aggregates. These aggregates hold their shape under compaction and moisture to provide high porosity and infiltration while creating a healthier growing zone. The Rutgers specifications require heat treating while the USGA specs do not.

As VPI's Hall states, the cheaper cost of straight sand topdressing is certainly tempting when compared with some of our more commonly-used topdressing materials. Although commercially-prepared topdress-

ings cost more than sand, they are inexpensive when compared to the cost of reconstructing or maintaining sports turf that has been abused with bad topdressing practices.

### NEW TALL FESCUES OFFER ALTERNATIVE

The new turf-type tall fescues may be the first viable alternative to warm-season turfgrasses for southern California parks and schools, according to results of a three-year study at the University of California, Riverside. The trials, conducted by Dr. Victor Gibeault and Richard Autio, showed the turf-type tall fescues were far superior to older "pasture-type" tall fescues and other cool-season grasses for weather conditions in the state.

While bermudagrass and other warm-season grasses are best adapted to the area, they go dormant in the winter and require overseeding with ryegrasses or rough bluegrass. The winter water needs of the overseeded grasses are greater than those of turf-type tall fescues.

The new tall fescues withstand summer heat better than other cool-season varieties. Their root systems are deeper so they require less frequent irrigation, withstand drought conditions better and are more tolerant of compacted soils. Turf-type tall fescues also tolerate saline soil conditions better than other typical cool-season turfgrasses.