

STRICTLY GOLF

Don't gamble on sand selection

Insist on sand that has been subjected to particle size analysis, says this author.

by Stephen McWilliams

■ When superintendents select general construction-type sand for greens construction or maintenance, they increase the potential for chronic turf problems.

Selecting sand for sand-based systems must be based on a proper chemically- and mechanically-dispersed particle size analysis. This process strips silt and clay from the individual sand grains to show a true particle size distribution. By not separating the silt and clay from the sand fractions, a basic drop sieve analysis (common in the construction industry) can misrepresent multiple sand grains as one particle.

Because the goal of a sand-based system is balanced air and water management, the level of fine and very fine fractions is critical in the initial grow-in and long-term operation of USGA-perched water table systems.

A basic turf management rule: don't topdress sand-based systems with sand that is finer than the base rootzone mix. Doing so can lead to restricted air movement due to layering, and as a consequence, root pruning, a loss of surface stability, and rapidly deteriorating turf quality.

When buying sands for a sand-based system, make sure the particle size distribution—the primary basis for your decision to purchase the materials—is determined by a chemically and mechanically dispersed particle size analysis. It is also prudent to sample and test the delivered sand. Mistakes do happen.

—The author is president and CEO of Turf Diagnostics & Design, Inc., Olathe, Kansas.

Comparison of full mechanical particle size analysis and dry sieve analysis						
Case 1				Case 2		
Dry sieve	%Δ	Full mechanical		Dry sieve	%Δ	Full mechanical
1.6	-0.9	0.7	Total gravel %	0.0	0.0	0.0
12.7	-3.9	8.8	Very coarse %	7.5	-5.7	1.8
31.0	-6.4	24.6	Coarse %	44.9	-17	27.9
30.8	-1.5	29.3	Medium %	31.4	+9.8	41.2
15.9	+7.5	23.4	Fine %	17.9	+6.6	24.5
2.9	+2.8	5.7	Very fine %	0.1	+.03	0.4

Textural analysis				
Case 1			Case 2	
Dry Sieve	Full mechanical		Full mechanical	Dry sieve
N/A	91.8	Sand %	98.4	N/A
N/A	0.3	Silt %	0.4	N/A
N/A	7.3	Clay %	2.1	N/A

The importance of full mechanical analysis

■ For any important turf application, these tables show that the quality of the sand has been misrepresented by an unacceptable testing method.

Case 1 and Case 2 show a considerable shift (%Δ) in sand distribution from the "Total Gravel," "Very Coarse" and "Coarse" fractions to the "Medium," "Fine" and "Very Fine" fractions. This indicates a potential risk of relying on a dry sieve analysis when buying sand for use in high-performance sand-based systems.

To meet 1993 USGA standards, all sand testing must be a full mechanical particle size analysis. All sand distribution testing for turf applications should be tested in this manner.

In a full mechanical analysis, if there is any silt and clay, the particle size distribution for the sand cannot total 100 percent as sometimes seen in the dry sieve method. If a sand particle size analysis is presented and the distribution totals 100 percent, further investigation is called for.

—S.M.

ELSEWHERE

More disease, super asks, p.34

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More disease in golfing world?

by Brian Mazey

■ An open suggestion to all greens chairmen, club presidents, golf committee members:

Let's take a little pressure off today's superintendents by asking for only 95 percent disease control instead of 100 percent. Five percent isn't that much to ask, especially since only the trained professional would notice the first signs of disease pressure anyway.

That way, all the superintendents who spend thousands of dollars spraying preven-

tively (or every two weeks, whether it's needed or not, because they are being pushed to perfection) could wait until the disease is actually present to apply fungicides.

If we can delay spraying a few days each time, all of a sudden we've extended our chemicals long enough to skip a few sprays over the course of a season.

This would make everybody happy:

- We would be saving money for the club, making the general manager ecstatic.
- We would be applying chemicals less

frequently, which would excite not only the golfer, but the superintendent and the applicator as well. Spraying is a time-consuming and sometimes aggravating task that we could all live without around the golf course.

● The people surrounding the course would find this quite neighborly, as well as the EPA, DER, etc.

We all know that less pesticides make for a cleaner environment and better living. I believe the road to that cleaner air and water starts with the club officials and members who persist in having the 100 percent perfect golf course all season long.

—Brian Mazey is golf course superintendent at Philadelphia Country Club in Villanova, Pa.



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Airplanes and the Audubon

by Tony Rzadzki

■ I remember spending hours with my dad at the rookery at Lincoln Park Zoo, just watching and feeding the ducks there. Sometimes we would go fishing off the horseshoe pier at Montrose Harbor in Chicago. We never caught many fish, but always enjoyed watching the gulls glide and dive around us.

I remember the trips we'd take to airports and the hours we'd spend watching man fly and land around us. I still marvel to this day at the miracle of flight. Maybe that's why, on behalf of my golf course, I joined the National Audubon Society.

We all take great pride in our golf courses, especially on those days when everything looks just right—almost perfect—and the golfers are enjoying themselves.

So why not go one step further? Why not make our places more livable for our wildlife? You need only to manage your tools and your land differently, with a new outlook and attitude.

I can think of no better way to promote yourself, your public image, and enhance the environment at the same time, then by joining the National Audubon Society.

Once you get involved you may begin to "self-check" your actions more often and give more thought to a project before you start it. You will understand more of what the land has to offer. You will feel better about your actions, your golf course, and yourself. You will also be making an environmentally sound statement to others that you have a genuine concern for your surroundings.

Maybe somewhere inside all of us, that little boy still loves to remind us to do what is right as stewards of our land and our future. The Earth that you occupy or manage belongs to everyone.

—The author is superintendent at Cantigny Golf in Wheaton, Ill.

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