



# One Guy's Opinion

By Tom Parent  
*River Oaks Golf Course*

## Sand Top Dressing Native Soil Greens — Is It A Good Idea?

*Editor's Note: This column is intended to spark a debate. It is not intended to anger anyone, and if it does, I apologize in advance. With any luck it will stimulate someone to write a rebuttal. That is what this column is for. I hope you will not get tired of my opinion because of the flood of articles written for this column.*

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Is sand top dressing native soil greens a good idea? If you can put down 12" of mix, a gravel layer and drainage all at one time maybe . . . if you can do it gradually, years and years from now, maybe . . . we all know that 1995 was a horrible year to raise turf in many parts of the country. Unfortunately, minor problems that you deal with in a normal year were magnified. Many of us lost turf on some or all of our greens. On many courses, poorly implemented sand top dressing programs can take the lion's share of the blame.

We must look at what we are trying to accomplish. One must assume that the ultimate goal would be to establish USGA type greens over a long period of time without disrupting play. This simply is not possible with a sand top dressing program. First, there is rarely adequate drainage installed. Second, there is not a gravel layer. Third, unless you or your predecessor is/was extremely diligent, layering almost always results.

Do you really want USGA greens anyway? Do you wish to join the ranks of us with localized dry spots, low CEC's, poor microbial environment, algae, etc. etc. USGA greens are just not that much fun to take care of. In short, you trade one set of problems for another. The USGA is not submitting requests for proposals for new green designs for no reason.

Ongoing research at the University of Wisconsin-Madison's O.J. Noer Turf Research Center showed no significant difference in turf quality on side by side comparisons of USGA greens and native soil greens. These tests were conducted under simulated wear condition and used a variety of cultivars and management practices.

Many sand top dressing programs are initiated to pro-

mote internal drainage and reduce thatch. In 10 to 30 years you may eventually have a 12" layer of sand mix. If proper drainage is installed you may succeed. Until then, however, you could have a very shallow perched water table. In years like 1995 when there were weeks of humid weather, greens with shallow perched water tables probably never dropped much below the saturation level.

As a consequence, soil oxygen levels may have approached zero for days or weeks at a time. Roots and beneficial soil microbes cannot live without oxygen. On the other hand, algae which live at the surface thrived. With out subsurface drainage a shallow surface layer of sand mix leave you very vulnerable. The end result . . . dead or badly thinned turf and algae.

Could the use of deep tine aeration combined with drainage achieve the same effect be without the risk? With the advent of 1/4" mini tine you can aerate on a monthly basis with little or no effect on ball roll. Conversion kits are available from most manufacturers and after market suppliers. By recycling your native soil which is rich in microorganisms, you will accelerate thatch reduction more effectively than any greens mix.

Let's look at what native soil greens can offer. First of all, you're raising your turf on soil, not an artificial mix. Except for compaction, native soil generally has many advantages over USGA greens mix. They have higher CEC's. They are usually rich in organic matter and they have a higher potential for beneficial microbial growth with greater water reserves. They were typically built out of the best soil the site could offer.

Ask a farmer which soil he would rather raise his crops on, your native soil or greens mix. Unless they're growing root crops with full irrigation, not many would choose the greens mix.

Without internal drainage, even deep tine aeration holes can quickly become saturated. Remember what the USGA was trying to accomplish with its greens design: resistance to compaction, percolation and gas exchange, and adequate water reserves. They never said grass would grow well on this mix and on many of them, it doesn't. In short, most of them require a tremendous amount of input to keep them healthy. Again do you want this?

If you're on a sand top dressing program, you are committed to continue. Keep in mind, however, the end result should be something that resembles a USGA green. Without internal drainage you don't have a key element of a USGA green.

If you're considering or being forced into a sand top dressing program, first consider strategies to avoid a saturated surface layer. Perhaps with a gradual blending of your native material with the top dressing mix, you could avoid the perched water table. Find a supplier who can guarantee you a lifetime supply of quality 80/20 greens mix. Be religious in your applications. Then use deep tines and mini tines and aerate, aerate, aerate!