

SuPerspective: Green Aerification

(Editor's Note: Three Superintendents, James Bade, Somerset Country Club; Jake Schmitz, Olympic Hills Golf Club, and Eric Counselman, Somerby Golf Club, were asked to respond to a questionnaire about Green Aerification.)

JAMES BADE Somerset Country Club

Seth Raynor, who cared about drainage and soil, designed Somerset Country Club in 1919. After WWII the course was re-modeled by Stanley Thompson, who loved the putting surface contours but didn't care so much about drainage and topsoil. Therefore, the greens at Somerset are push-up with some of them having a clay subsurface.

The normal practice in the 60s and 70s was to core aerate the greens once a year and drag the cores back in. Somerset's sand topdressing program started in the late 90s. At that time we started removing the cores and back filling with pure sand. To catch up a bit we were core aerating



twice a year with fi inch hollow tines.

Then what does one do when you want to keep moving forward but at the same time give the membership a break from aerating twice a year? Furthermore, we had a USGA event scheduled a week after our aerating date, so we decided to try the dry-ject method.

Since you are adding sand and not removing anything my first concern was bulk density. But Dr. Carrow from Georgia didn't feel as if the bulk density would go up. My next concern was whether the sand was really going in, but common sense says that the 22 tons of sand had to be going somewhere. Even though the sand doesn't go in that deep it does go in

and you are getting major topdressing done at the same time. And if you are a Dr. Rossi fan topdressing is more important than aerating anyway.

To demonstrate the machine, Superior Tech Products, used green sand to show where the sand goes. We first used the machine in 2006, the photo was taken this spring. Since we were one of the first users on a large scale we had a learning curve. I'm convinced the first time we used it the sand was too hot (from being dried) and it took a long time for the hole to heal over. Now the sand is delivered a few days in advance.

The second thing we learned is that when the push-up greens are hard the sand does not penetrate as much. So now we give the greens a solid cycle of water. On our two greens that are more of a sand base, the dry-ject works much better compared to the harder push-ups.

To do all 18 greens in one day, Superior Tech brings three machines. To make it more affordable the Somerset crew delivers the dry sand to the machine. Get ready to buy pizza because the crew will be lifting 22 tons of sand. Three people from our crew went with each machine. One person picks up the sand in a cart, the other delivers the sand to the machine and the third person pours it into the machine. Since the sand has to be dried we duct tape all the seams on the cart so you aren't losing sand all over the golf course.

After aerating, the greens are dragged and then rolled and the finished product looks pretty good. The members are actually quite excited. What I find interesting is that the very next day the greens are quite puttable, however, the hole can linger just as long if not longer than fi" hollow tine, which is around two weeks or more. One time the machine was out of adjustment and the green was actually like a wash board for quite some time. We could not get it flattened out.

I think what the crew likes, even though they are busting 5-gallon pails of sand is, once they are done that is it, they aren't out sweeping sand into holes for the next few days. The mechanic likes it as well since it is easier on the reels.

To summarize, the greens are very puttable the next day, however the hole can remain for 2-3 weeks. The members are very happy that all the holes are filled with sand and less bumpy. It basically is a



JAMES BADE
Somerset Country Club

one step process compared to core removal. The greens are under less stress with this process if the weather happens to be hot and windy. It is somewhat expensive to do all 19 greens but our membership is willing to pay that price.

A concern or observation I made this spring was that the dry-ject sand (from



2009) was dry while the rest of the profile was moist. The sand did re-wet so it wasn't hydrophobic. So I am not sure what is going on there. And one has to be very observant to make sure the machine is in proper adjustment so you aren't creating a lumpy wash board green, then you might as well be core aerating.

I like the process, this year due to budget cuts we will probably fore go the dry-ject unless we are well under budget. It is a great supplemental tool to aerating if you have schedule conflicts or if you want to give you members a break from the conventional process.

(Continued on Page 20)

SuPerspective-

(Continued from Page 18)



JAKE SCHMITZ
Olympic Hills Golf Club

Olympic Hills Golf Club, founded in 1969 in Eden Prairie, MN. The course is a Charles Maddox design featuring large teeing grounds and greens with a good deal of movement.

The original greens were built in the push-up style. Native soils include a sandy loam on the upper 10 holes; the lower holes were built through a wetland area, and sub-soils range from sand to peat and muck. Four of the six greens on the lowers holes have since been rebuilt to a sand-based system.

I have been at Olympic Hills since October 2006. Initially my program consisted of coring twice a year with 5/8" tines and burying with copious amounts of sand. In-season topdressing was performed every two weeks. The initial goal was to firm up the playing surfaces through the introduction of straight sand topdressing following aerification, verticutting events, and burying for protection prior to winter. The result was a stressed stand of turf that was highly susceptible to poa annua invasion. Spring 2009 was met with significant turf loss, specifically on the greens, due to all the annuals that had moved into the putting surfaces.

We have since increased our aeration practices; however, we currently are not pulling any cores. Our greens are needle tined monthly with 3/16" tines on vertidrain to a depth of 7 inches. Lacking the proper equipment, we contract this service out with Tom Notch of Deep Tine, LLC. In early fall, I am planning to have the greens verti-drained with 1" solid tines. A heavy sand application will be applied prior to the solid tining.

We are not eliminating core aerification from our cultural program; we are currently utilizing solid tines to curtail the

poa and enhance the bentgrass. Thatch levels and organic material will be closely monitored, and core aerification will once again be utilized to remove the material.

Our membership is pleased with the results of the current program, and I am happy with how the greens have responded. Root depths have increased significantly, which in turn has impacted the amount of irrigation and fertility applications. Temporarily halting core aerification is concerning, as this is a proven maintenance practice to ensure long-term turfgrass health. As our stand continues to transition, this will again be utilized on an as-needed basis, dependent upon thatch and organic material levels.

ERIC COUNSELMAN
Somerby Golf Club

Somerby Golf Club opened its doors in 2004 as a championship private golf club. The course is a links style golf course with rolling hills and plenty of hazards designed by Tom Lehman and John Fought. We were host to the Nationwide Tour in both 2006 and 2007.

The original green construction was built to USGA specs, greens mix of 89/11, seeded A4 bentgrass.

The historical aerification program from 2003-2007 consisted of monthly knifing and sand topdressing only.

The new aerification program: Solid tine monthly (PlanetAire spacing 2" x 2",



ERIC COUNSELMAN
Somerby Golf Club

2.5" deep) with bayonet tine size varying from 1/8" in peak season and 3/8" late fall. This has had little to no impact when using the 1/8" tines. Knife then mow right behind. Benefits include compaction reduction, water and penetration, soil shattering improves "trueness of putting." Continuous topdressing every three weeks. Scarify beginning of September, 1.5" spacing, 1/2" deep, two directions, 0.1" width of blade, followed by heavy topdressing. Benefits include thatch reduction and incorporation of sand, with less impact on playing conditions than traditional core aerification.

We have never core aerified our greens. We use small frequent amounts of slow release Nitrogen throughout the season, annual total 2-2.25 lb N/M. We have not used any growth regulators on greens since July 2008.

