Sometimes More Is Less

A tip for increasing aerification effectiveness and reducing disruption.

BY DAVID A. OATIS

Eric Greytok, Winged Foot Golf Club (N.Y.), modified his aerifier to narrow the spacing pattern and increase the tine size. The result is aerified greens, modified soils, and less surface disruption.

The single biggest problem facing golf course superintendents today is the pressure to avoid disruption, both of the turfgrass surfaces and of the golf schedule. As a result, superintendents are finding it increasingly difficult to find the time necessary to carry out normal turfgrass maintenance tasks. Cultural activities such as verticutting, topdressing, fertilization, etc. frequently are delayed or missed entirely as a result of a heavy golf schedule. Aerification often suffers a similar fate. Aerification of putting greens generally means disrupting the putting surfaces for as few as a day or two, to as many as three or four weeks or more. Not surprisingly, tremendous pressure can be brought to bear on superintendents to aerify less and to choose the least disruptive equipment (such as smaller or perhaps solid tines).

If everyone dislikes aerification so much, one has to wonder why in the world putting greens still get aerified. The answer is simple: Despite the many advances in the science of turfgrass management, good old-fashioned hollow-core aerification remains one of the most important tools available to superintendents today. A properly timed and conducted aerification program can help superintendents address a number of different problems, but the trick is getting it done with minimal disruption to the course and perhaps even your career.

There are many different aerifiers on the market today, and there are just as many options for equipping them. We have conventional aerifiers, deep-tine aerifiers, drilling and filling machines, and high-pressure air and water injection, for example. The conventional high-impact vertical piston type can be outfitted with solid or hollow coring tines ranging in diameter from ¼" to 1⅛" or more. With all of these options, the key to success is to identify your soil problem and design a program to address it.

When it comes to modifying soils, the number and size of the aerification holes are critical. More and larger holes cover more surface area, and larger holes are much easier to fill with topdressing material. So, the choice should be an easy one, right? Courses with a particular need to modify soils or reduce thatch need larger holes (so they can be filled) and more holes per square foot to impact as much surface area as possible. Unfortunately, it isn't always easy. Larger holes increase both surface disruption and golfer dissatisfaction.

If your putting green soils require modification, this turf tip is for you. It comes from Eric Greytok, golf course superintendent at Winged Foot Golf Club in Mamaroneck, N.Y. It is unique in that Eric has discovered a method of aerifying greens and effectively modifying their soils, and this is accomplished with less surface disruption. That may sound like a tall order, but if you listen to this turf tip, I think you'll agree.

Eric's tip is very simple. Use a narrower spacing pattern and a larger tine. Eric uses Ryan Greensaire aerifiers, but this could probably be accomplished with many of the other available models. Eric had the quadra-tine holder attachment, but modified it to accept a larger tine. In addition to drilling out the tine holders, the slots in the turf hold-down kit had to be widened. Instead of the traditional 2½" spacing, the quadra-tine holder has 1¼" spacing, and with a larger hollow tine, it now has the capability of affecting an impressive amount of surface area. Most surprisingly, the surface disruption is actually reduced and the end result is impressive.

The quadra-tine holder was modified to accept a larger ½" hollow aerification tine. It now has the capability to impact a larger amount of surface area.

Switching from a ¼" tine to a ½" tine quadruples the amount of surface affected, and changing the spacing from 2½" to 1¼" also quadruples the number of holes per square foot. All told, using a ½" tine on a spacing of 1¼" affects an impressive 13.64% of the surface area! Compared to the old traditional approach of using ⅝" hollow tines on 2½" spacing, which affects only 5.33%, this new approach affects 2½ times more surface area and leaves the surface much smoother. Thus, more but smaller holes can result in significantly more surface area being affected with less overall disruption. Hence, *sometimes more is less!*

The downside? With all those holes, plan on using more topdressing material, and you may need to hand-broom it in for optimum effectiveness. For more information about aerification hole spacing, tine size, and the percentage of surface area affected, read Pat O'Brien and Chris Hartwiger's article, "Aerification by the Numbers," which appeared in the July/August 2001 issue of the *Green Section Record*.

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Tine Size and Surface Area Chart

Tine Size (in.)	Spacing (in.)	No. Holes per ft. sq.	Surface Area of One Tine	Percent Surface Area Affected
¼	1.25 x 1.25	100	0.049	3.41%
¼	2.5 x 2.5	25	0.049	0.85%
½	1.25 x 1.25	100	0.196	13.64%
½	2.5 x 2.5	25	0.196	3.41%
⅝	2.5 x 2.5	25	3.07	5.33%