# USGA Green Section Record REGIONAL UPDATE

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Deep-tine aeration encourages water infiltration, gas exchange and root growth deep into the putting green profile.

## DEEP-TINE AERATION: DEFERRED MAINTENANCE YOU SHOULDN'T DO WITHOUT by addison barden | agronomist, southeast region

Deep-tine aeration is one maintenance practice that provides proven beneficial results consistently and is worth every penny. We all know about deep-tine aeration, but it can unfortunately be considered a "luxury" cultivation practice. Regardless of the maintenance budget, labor situation, available equipment, soil type, or any other roadblock preventing your facility from deep-tine aerating greens and fairways, it should be performed annually. This is especially true on sites where heavy, poorly draining soils are present.

### **Putting Greens**

One common trend observed on putting greens that are only aerated using a traditional aerator – with a maximum depth of 4 to 5 inches – is reduced rooting at the maximum aerator depth. Additionally, when examining the soil profiles of these greens, there can be a distinct interface that separates the aerated



portion from the rest of the soil profile. This layer is suspected to form from repeated aeration treatments at the same depth.

Facilities that regularly deep-tine aerate their putting greens are able to break this layer and encourage water infiltration, gas exchange and root growth deep into the putting green soil profile. How many deep-tine aeration treatments on putting greens are enough? There are obvious variables that impact the optimal frequency, but at least one deep-tine aeration per year, scheduled in conjunction with traditional aeration and just prior to optimal root growth should be the goal. However, poorly draining soils can be deep-tined more frequently.

For information on the USGA's Course Consulting Service Contact the Green Section Staff.

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#### Fairways

While it's a slow, time-consuming process, deep-tine aeration on fairways is a great cultivation treatment to improve playing conditions and turf health. If the acreage involved is preventing you from deep-tine aerating fairways, consider contracting the service or only aerating several fairways at a time. Improved infiltration will be immediately apparent. If hard soils are breaking tines or shaking operators too hard, consider using new deep-tine aeration machines that utilize large blades that create deep slits in the turf. These slits have the same positive benefits as traditional deep-tine aeration with minimal disruption to the playing surface. While still a slow process, the slicing action of these new machines is less violent than tined machines, and can still loosen hard soils considerably.

#### **Getting it Done**

Deep-tine aeration is a cultivation practice that every golf facility could benefit from, yet those facilities in greatest need of these benefits are often the ones who have difficulty justifying the time or the costs. However, contracting an annual deep-tine aeration service could offer drier, healthier putting greens and fairways after that Friday rain before the busy golfing weekend.



#### SOUTHEAST REGION AGRONOMISTS:

Chris Hartwiger, Director, USGA Course Consulting Service, <u>chartwiger@usga.org</u> Steve Kammerer, Regional Director, <u>skammerer@usga.org</u> Patrick M. O'Brien, Agronomist, <u>patobrien@usga.org</u> Addison Barden, Agronomist, <u>abarden@usga.org</u> Information on the USGA's Course Consulting Service <u>Contact the Green Section Staff</u>