



The Big Pendulum

By David Oatis, regional director, Northeast Region

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Recently, I've visited several golf courses where the accumulation of organic matter in putting green soils was a problem. You're probably thinking I'm referring to excessive organic matter, because excessive organic matter in putting greens is a common problem – not this time. In excess, organic matter – or thatch – is a problem. A thick layer of thatch at the surface of a putting green functions much like a kitchen sponge – i.e., it retains moisture at the surface, keeping putting greens soft. Thatchy greens play poorly and have problems with localized dry spots, disease, scalping, algae, moss, etc. However, some thatch is essential because it stabilizes the soil and provides resiliency. Immature greens often do not have enough thatch and, as a consequence, frequently experience more injury from maintenance and golfer traffic.

The problem I've recently noticed on some greens – even older greens – is that they don't have enough thatch. Insufficient organic matter can result from several factors like excessive aeration, verticutting, or topdressing and inadequate fertilization.

Several courses have reported above-normal turf growth and reduced efficacy of plant growth regulators this summer, which I attribute to peculiar weather patterns – especially rainfall. Regardless of the cause, a typical response has been to reduce nitrogen fertility until turf growth subsides. Reducing nitrogen fertility is becoming a common trend and, as has been observed many times in the past, low nitrogen fertility can work really well...for a while. Maintaining greens at lower nitrogen levels often results in faster green speeds and finer leaf texture, but greens receiving too little nitrogen rely on soil reserves that eventually will be depleted. The depletion of soil nitrogen reserves may happen slowly – making it difficult to detect – but the health, wear tolerance and wear recovery of turf gradually decreases under deficit nitrogen fertility. At first, you may notice that

ball marks are slow to heal, the greens may be slow to heal from aeration or a gradual decrease in turf density. Over a longer period of time soil organic matter levels may decline. In extreme cases when organic matter levels become too low, putting greens can become unstable and more prone to disease outbreaks.

It wasn't long ago that anthracnose was the scourge of annual bluegrass greens. Fortunately, research and field observation eventually revealed that increasing nitrogen fertility is one of the easiest ways to prevent anthracnose. Memories of anthracnose-ravaged greens have faded, but low nitrogen fertility programs threaten a return of anthracnose.

My advice? Don't fall into the trap of repeating past mistakes. Low nitrogen fertility programs can work well for a while, but problems arise once nitrogen reserves are depleted. Don't be fooled; malnourished turf is susceptible to numerous maladies – e.g., moss, algae, anthracnose, or an inability to handle stress and wear – which can be easy for the “next” superintendent to fix. Now is a good time to closely examine your fertility program. There are good trends and bad ones; an ultra-low nitrogen program is one trend to avoid. Here are a couple of thought-provoking articles to review as you consider your fertility program:

[Low-Carb Diet](#)

[Best management practices for anthracnose on annual bluegrass](#)

August can be a great time to aerate greens, so aerators are beginning to fire up at courses across the region. With optimal growing conditions, aerated turf often will heal in a couple weeks, leaving the fall golf calendar free of disruption. However, August also can be a bad time to aerate if turf is weak or the weather is stressful. Be sure to carefully evaluate turf health before determining how aggressive to aerate. Also recognize that summer patch outbreaks can be kicked off with aeration. Make sure your turf is protected.

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