ALL THINGS CONSIDERED –
a USGA staff opinion

Nature is Taking Its Course

By Jim Moore

Okay, please bear with me while I gripe about my end of the industry. I hate to sound like the crabby old man I'm trying desperately not to become, but it seems Nature is taking its course. Now by *Nature is taking its course* I don't mean that it is a given that I will become an old grouch. What I mean is that the terrible summer experienced by so many courses this past year was predictable and inevitable -- we asked for it and we got it.

In 1987, I wrote an article for the *Green Section Record* entitled, "Management on the Edge". (link to the article) The article emphasized that many courses were simply pushing greens too hard to maintain very fast Stimpmeter speeds. At the time, *pushing* meant 0.125" cutting height (we used to call it 1/8th) and nine feet on the Stimpmeter. The article was inspired by the frequent failure of greens across the country as the older bentgrass strains failed under the pressure. Those failures led to a lot of lost jobs, lost revenue, and lost memberships at courses everywhere.

So, what did we learn from that experience? One very important thing was that we needed better bentgrass varieties with greater heat tolerance. We also needed better equipment, irrigation designs, use of better green construction, and, most importantly, better-trained superintendents. The good news is that we did all these things. The bad news is that we cannot stand our own success.

After a few years of relative peace, the industry decided, once again, that we could "push" greens harder and provide better playing conditions all year long. Cutting heights of less than 0.100 and Stimpmeter speeds exceeding 10 feet became commonplace, and before long expected on a daily basis. The situation escalated further when too many courses were built, and the competition for too few players heated up. Fearing they would lose players to the golf course down the street if they aerated (and they probably would), golf courses skipped this vital process or began using aeration tines that were so small that they did not disrupt play. Unfortunately, the practice did not do much good from an agronomy perspective, either. It did not take long for us to find ourselves right back in the same situation as in 1987. A very large number of courses across the country managed their greens on the edge of failure. The straw that broke this camel's back was the summer of 2010.

Without wearing anyone out with turfgrass physiology, there is a simple balancing act going on in turfgrass plants every day. Turfgrass plants have two major jobs to keep themselves busy (and alive); respiration and photosynthesis. Respiration *consumes* energy, using up food and oxygen and producing carbon dioxide. Photosynthesis *releases* energy (light) and produces food, using up carbon dioxide and producing oxygen. It may not be the best of analogies, but you can compare this to consuming calories and then burning them. I've heard that if you burn more calories than you consume, you lose weight (I am going to try this someday). In the bentgrass world, if rootzone temperatures get too high, respiration exceeds photosynthesis and the plant loses roots and eventually dies. Making matters worse, lowering cutting heights decreases leaf surface, reducing the plant's ability to capture light and thus curtailing photosynthesis. I'm guessing you get the idea, so that is the end of Turfgrass Physiology 101 class today.

So, back to why I'm crabby. I have spent almost 30 years of my life trying to get people to be sensible about cutting heights and green speed with what appears to be no success whatsoever. Every time an aspect of greens management is improved to increase the health of the plant, we simply push it just that much harder until the next disaster occurs. Come to think of it, I should not be crabby at all. Pushing greens to the edge of failure is job security for me.

Next time I promise to write something more upbeat and cheery – like the life cycle of grubs.

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