Organic Matters

Excessive organic matter in greens can make putting surfaces soft, wet and bumpy.

Who likes smooth, true putting greens? Of course the answer is everyone, but it takes more than just a sharp mower and a roller to produce a high-quality putting surface that resists the transformation from glassy smoothness to a landscape of moon craters and scuff marks throughout a day of heavy play.

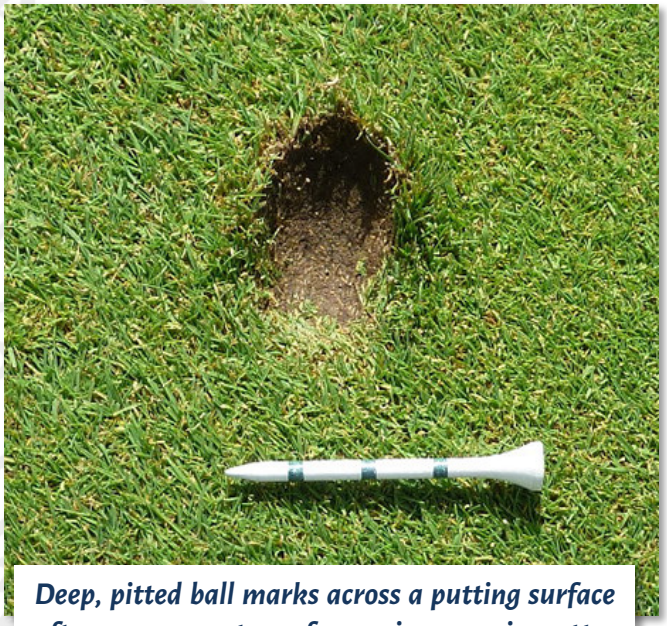
A variety of factors are responsible for how quickly a putting surface transitions from smooth to bumpy during a busy day. We can't control rain that softens a green or make a small green twice as big to spread out wear from ball marks and concentrated foot traffic. However, we can control other aspects – e.g., irrigation management, aeration frequency and sand topdressing applications – of putting green management that ultimately impact surface conditions.

Why are topdressing and aeration practices so critical to the maintenance of smooth putting surfaces? After all, any serious golfer knows that punching holes in smooth turf will temporarily disrupt the playing surface. The answer to this question is found not on, but just below, the manicured carpet of living grass that we call a putting green.

A dense, healthy stand of turf constantly adds organic matter into the soil when roots, shoots, stolons, and other plant parts die back and are replaced throughout the growing season. Soil microbes will quickly decompose a portion of this plant debris, but what's left behind will slowly decay, accumulating in the soil. The rate of organic matter production, decay, and accumulation are affected by variables like grass species, fertilizer inputs, temperature, mowing height and many other factors.

Topdressing dilutes organic matter produced by dense, healthy turfgrass. Dry sand can be efficiently worked into turf with a lightweight brush or cocoa mat.

A little organic matter accumulation in a putting green is good because it provides a cushioning effect similar to the thin foam backing beneath your living room carpet. It also affords protection from the wear associated with concentrated foot traffic and frequent mowing while providing the surface resiliency needed for a green to hold a well-struck shot. On the other hand, anything more than a little organic matter will clog pore space in the soil and eventually causes the surface to become chronically wet, spongy, and plagued by deep, pitted ball marks.



Deep, pitted ball marks across a putting surface often are a symptom of excessive organic matter accumulation in the upper soil profile.

So, how does a one-two punch of aeration and topdressing address this problem? Most golf courses spread light, frequent applications of sand across greens whenever the turf is actively growing. The sand constantly dilutes organic matter and prevents it from consolidating into a dense, peaty layer that can seal off the surface of a putting green. Topdressing also provides golfers a smooth, firm playing surface.

Standard hollow-tine coring operations will physically remove a small percentage of the organic matter from greens whenever plugs are removed. The amount of organic matter removed from a green by hollow-tine aeration depends on the size of the aeration holes and the distance between holes. Visual examination of the soil profile and laboratory soil tests can help determine how much aeration and topdressing is needed to maintain the ideal level of organic matter in putting greens.

Each golf facility is unique, so the aeration program needed to provide a smooth, firm putting surface at your course may be quite different from the program needed at a neighboring golf course. Be patient when the greens need aeration and keep in mind that the temporary annoyance you experience today is a small price to pay for the smooth, true surfaces you will enjoy the rest of the season.