

Holey Smoked—What Happened With This Year's Fall Aeration?

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A recent spate of phone calls from green chairs and "interested golfers" would make one think that the fall aeration completed primarily in September resulted in the greatest amount of turf loss ever seen on the west side of the Cascade Mountains in Washington. It seems that each phone call bemoaned the "fact" that their golf course was the only one that suffered any damage and what did the superintendent do to cause all of this carnage. Now that most of the worst turf loss has recovered it is important for those that say "it only happened at our course" to understand that, "No, it did not!" Based on personal observations and conversations with several golf courses, here is what happened at *several* golf courses this fall:

- **Warmer than normal weather during and following the aeration operation.** The month of September had more than two weeks of extended temperatures during the afternoons in the high 80's to near 90 degrees F. While this is perfect weather for aeration, as the sand is easily dragged into the holes, there are two programs normally conducted that generally do not cause major problems that did result in "setting up" some golf courses for turf decline.
- **Excessive irrigation and high nitrogen fertilizer applications set the stage for potential turf weakness.** It is a very common practice to make sure *Poa annua* greens remain adequately watered following aeration due to the amount of sand applied for this operation and the existence of very warm weather combined with shallow roots. At the same time, it is equally common to apply fast release nitrogen sources or suspend growth regulation applications to provide a faster recovery of the aeration holes as players' desire "perfect" conditions as fast as possible during this prime time. However, when temperatures are excessive and combined with ample water and fertilizer, certain pathogens also can cause problems as

occurred at several golf courses in Western Washington during middle to late September.

- **The existence of *Pythium* species that attacked during perfect conditions on both creeping bentgrass and *Poa annua*.** More than a half dozen golf courses ranging from the highest to the lowest budgets suffered from minor to major turf loss on one or more greens within 1-2 weeks following fall aeration. Samples sent to qualified labs nearly always showed very high levels of *Pythium* with the causal agent of *Pythium* root dysfunction the most commonly found on creeping bentgrass and some on *Poa annua*. While seen on creeping bentgrass over the years in our region, it was surprising to see it have such an impact on normally resistant *Poa annua*. However, there was one more normal program that is conducted at virtually every golf course that may be most responsible for taking these greens over the edge.
- **Mechanical damage from dragging, vertical mowing, or simply too much sand.** During every aeration operation where cores are or are not removed, heavier than normal amounts of sand are applied to fill the holes. While the previous combination could cause problems at your golf course, how you move the sand into the holes and how much sand you apply can have a major impact on damage to your greens. In some cases, too much sand caused a simple suffocation of small areas while other courses showed severe weakness on those greens that are shaded from too many trees. In other cases, the use of vertical mowers to move excess sand into the slightly sunken aeration holes a few days after aeration (a very common practice) may have been detrimental in moving the pathogen located near the surface.

So what is the take-home message in all of this? First, your golf course is not the only one that may have suffered from turf loss on one or more greens this fall following aeration. Second, don't change the dates of your fall aeration next year, but do be aware that extra inputs of nitrogen and water can set up disease activity from certain fungi that normally are not a problem for the area. And finally, reconsider the criticism focused at your golf course superintendent. They can control whether or not they conduct certain programs - they cannot control the weather!

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