

Clark Talks Turf

■ TIMELY TURF ADVICE



→ Organic matter management

Roch Gausson, Ph.D., is a professor of turfgrass science and department head at the University of Nebraska-Lincoln. He has devoted much of his time to addressing organic matter accumulation in cool-season grass putting greens. Gausson can be reached at rgausson1@unl.edu.

Q Before we discuss the conclusions of your research, briefly describe the research you conducted that allowed you to reach the conclusions. We have conducted several field studies under controlled conditions. We undertook a two-year survey of over 130 golf courses in the northern U.S., from coast to coast. We asked the superintendents numerous questions about their greens and how they managed those greens. Superintendents submitted more than 1,600 samples from poor-, moderate- and high-performing greens from their courses for organic matter determination.

Q What did you learn about organic matter management from the survey? Greens with the lowest organic matter were topdressed with 100 percent sand at a rate of 18 cubic feet or greater per 1,000 sq. ft. per year. A more complete discussion of organic matter management can be found at <http://tinyurl.com/9fy8s4o>.

Q Did frequency of topdressing matter? No. By default, if a superintendent is going to apply 18 cubic feet of sand topdressing per 1,000 sq. ft. per year to greens, the only way greens will

remain playable throughout the growing season is to make numerous light, frequent applications of sand topdressing. Topdressing weekly or every two weeks during the season was common to greens with lower organic matter.

Q Did cultivation make a difference in managing organic matter accumulation? Yes, from the sense that any and all cultivation techniques that helped incorporate sand into the profile were important in managing organic matter accumulation. The specific cultivation technique was less important than regular, light cultivation to help move sand into the rootzone.

“It just doesn’t make sense to try to establish a single threshold for organic matter accumulation.”

Q What do you think of the concept of establishing a numerical threshold for organic matter content? So any number above that specific threshold would mean superintendents need to take action to control organic matter accumulation? I don’t think there is a single magic number or threshold for organic matter accumulation in greens. Our research showed that greens performed well over a range of organic matter content in the rootzone.

There are too many variables to try

to account for, with geographic location topping the list. A green in Utah will be different from a green in coastal Washington. Considering the variability between locations, along with all the other conditions such as cultivar, length of growing season, rootzone composition, etc., it just doesn’t make sense to try to establish a single threshold for organic matter accumulation.

There are also challenges in which method to use to determine organic matter content in a putting green rootzone and using a consistent technique when collecting samples for organic matter determination.

Q What did you learn from your field research studies? The major conclusion was that on greens that have been topdressed lightly and frequently on a routine basis for several years, pulling a core when aerifying was not necessary. Light cultivation when topdressing is important to get the sand into the profile, but plots that were aerified with either a hollow or solid aerification tine showed no differences in performance or organic matter accumulation.

Q Is there anything else you would like to add? Get the topdressing sand into the profile. It does you no good in the mower baskets.

Also, I greatly appreciate the support of the USGA, the Environmental Institute for Golf, the Nebraska GCSA, the Peaks and Prairies GCSA and the GCSA of South Dakota for helping fund our organic matter management research.

Clark Throssell, Ph.D., loves to talk turf. He can be reached at clarkthrossell@bresnan.net.