



Research Report

Title: The Effect of Liquid Aeration Protocol on Organic Matter Content of California Greens

Location: Eagle Ranch Golf Club
Eagle, CO

Principal Investigators: Derek Rose, GCS

Date: Summer 2022

Crop: Turfgrass **Cultivar:** (approx. 80% bentgrass, 20% *Poa annua*)

Abstract:

The purpose of this trial was to evaluate the effects of the Liquid Aeration protocol (Thatch Relief¹ and Oasys Ultra²) developed by Soil Technologies on turfgrass. Tees and greens of Eagle Ranch Golf Club received applications of the Liquid Aeration protocol in 2020, 2021, and 2022 and soil tests were taken in 2021 and 2022 to evaluate changes in soil conditions. No core aerifications have been performed on greens at Eagle Ranch Golf Club since 2014.

Methods:

Soil samples extracted from turfgrass on two greens at Eagle Ranch Golf Club were tested and evaluated for changes in organic matter percentage. The turfgrass at this golf club has received the following Liquid Aeration protocol (in addition to deep tine aerification) in 2022 and received similar applications in 2021 and 2020:

Tank Mix*	
Thatch Relief	5 gal
Oasys Ultra	5 gal
Water	250 gal

* The mixture used was made at a slightly higher rate than Soil Technologies' recommendation and was applied to 165,000 ft²

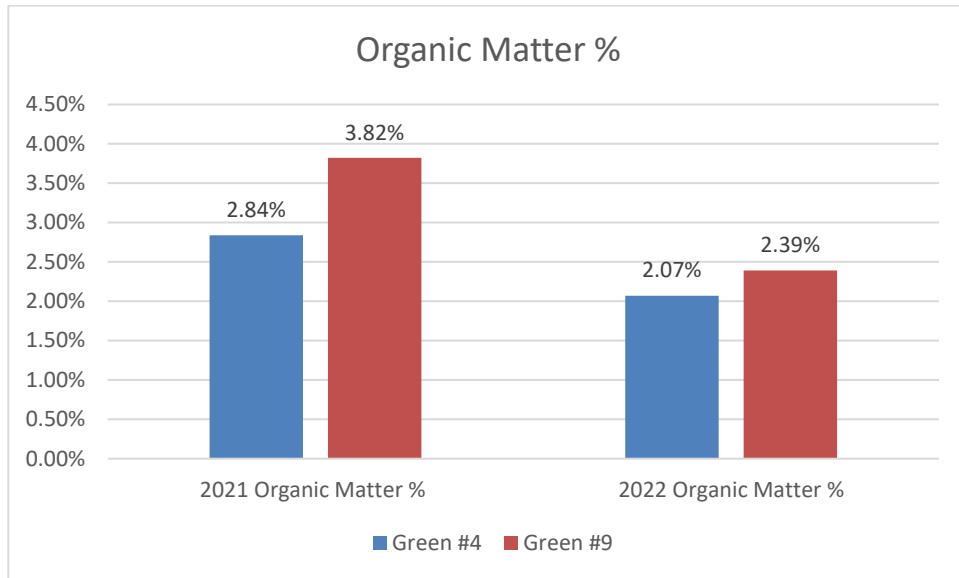
¹Thatch Relief is a natural product designed to decompose excess thatch in turfgrass developed and manufactured by Soil Technologies Corp. in Fairfield, Iowa USA

²Oasys Ultra is an OMRI listed turfgrass surfactant developed and manufactured by Soil Technologies Corp.

To evaluate changes in soil conditions, soil tests from 2021 were compared to tests taken in 2022.

Results:

Soil tests performed for this trial demonstrate a decrease in organic matter in the top six inches of soil. Organic matter percentage on green #4 decreased from 2.84% in 2021 to 2.07% in 2022 and green #9 decreased from 3.82% to 2.39%.



Conclusions:

Results from this trial demonstrate that the use of Soil Technologies' Liquid Aeration protocol in conjunction with deep tine aerification can help to reduce organic matter in putting greens. Soil tests taken in this trial demonstrated decreased organic matter percentage in both the tested greens over the course of one year.