



Super Science

// TEN YEARS LATER

SOIL ANALYSIS BEFORE, 10 YEARS AFTER EFFLUENT IRRIGATION

Yaling Qian, Ph.D.

To ensure sustainable and affordable water supplies, more and more golf courses are using effluent water for irrigation. It is well documented that some effluent water sources have marginal quality with relatively high levels of nutrients and salts.

Long-term and continued use of effluent water may lead to changes in soil chemical and physical properties. To determine the degree of soil property changes, we compared soil and turfgrass samples collected at the initiation of, and ten years after, effluent water irrigation at several golf courses in the Denver area.

Ten years ago, prior to the start of using effluent water for irrigation, we collected soil and plant baseline information at several golf courses. All the sampling sites were marked physically (by burying a metal rod at each sampling spot) and with GPS systems. The original soil samples were archived for measurement comparison.

Baseline data is available for both soil and turfgrass. In 2014, 10 years after the start of effluent water irrigation for these sites, we will re-sample those sites. Soil cores will be collected about one foot from the baseline soil sampling locations.

Samples will be taken at different depths at 0-7.9, 7.9-15.7, 15.7-23.6, 23.6-31.5 and 31.5-39.4 inches below soil surface. The 10-year long-term evaluations in real world conditions will be very valuable. At the same time, we will determine turfgrass and landscape plant quality and mineral composition prior to and after 10 years of irrigation with effluent water.

Yaling Qian, Ph.D., is in the Department of Horticulture at Colorado State University. Dr. Qian can be contacted at yaling.qian@colostate.edu for more information.



Golf course irrigated with effluent water

PHOTO BY: YALING QIAN

NEWS UPDATES

MATT CIMINO, CGCS, JOINS CIVITAS

The Civitas team welcomes superintendent Matt Cimino, CGCS, to their team. Cimino joined the Civitas team May 5, 2014 as Sr. Technical Services Advisor in the Southern USA, supporting the Professional Turf team.

"We're very pleased to have Matt joining our Civitas team," says Oriana Persechini, lawncare category portfolio manager, Petro-Canada Lubricants. "We feel his experience, knowledge and professionalism make him a perfect fit for our brand and we're excited to work together to help grow Civitas across the Southern US."

While in the field, Cimino has had ample experience growing and constructing championship-quality courses from Ohio and



Virginia to Missouri and Texas.

"Turf maintenance is my life. As a previous superintendent, I know the issues, the hours, the schedules as well as the feeling of accomplishment of delivering high quality

turf," says Cimino.

As part of his new role, Cimino will be responsible for providing technical support for the Southern states, handling golf courses and turf in the warm season region.

PREPARING FOR WINTER INJURY SHOULD BE CONSIDERED A YEAR-LONG PROCESS THAT ENCOMPASSES A NUMBER OF DIFFERENT CULTURAL PRACTICES."

Sam Bauer

(see full story on page 30)