An answer to anaerobic black layer?

Sulfur causes black layer in sand greens, according to researchers at Michigan State University. Black layer is a layer of anaerobic material found at the same level throughout a green.

Joe Vargas, Ph.D., of Michigan State University says theories on black layer attributed it to algae, root dysfunction and excessive water. But his current research shows sulfur to be the cause of the problem.

"Yes, you see algae, but it comes in after the layer is already formed," Vargas says. A rotten egg-like odor will most likely indicate a black layer problem.

Excessive sulfur can get into the green by using water with a high sulfate content or treating a green with sulfur to help balance the pH level. It appears that acid rain also adds to the problem.

The combination of too much sulfur and saturated conditions usually leads to black layer. "You can be most frugal at watering, but then you'll get rain," Vargas says. "Don't mess with sulfur."

Vargas says that sulfur-coated urea products "probably won't release sulfur quick enough to cause a problem." Researchers plan to study potassium and iron sulfate products and those products containing sulfide in the future.

Vargas released his findings at the Reinders Turf Conference in Milwaukee, Wisc.

ChemLawn reaches agreement on merger

A merger agreement has been reached between ChemLawn Corp. and Ecolab, Inc., St. Paul, Minn.

Ecolab will buy all outstanding shares of ChemLawn for $36.50 each in cash, ChemLawn officials said. The deal is worth $370 million.

ChemLawn originally was the target of a takeover attempt by Waste Management Inc., Oak Brook, Ill., which offered $33 then $35 per share. ChemLawn rejected the Waste Management bid, then told its banker to seek other possible buyers.

ChemLawn had filed suit for a preliminary injunction from the federal court in Columbus, Ohio after the initial bid, claiming that Waste Management failed to disclose in its tender offer an alleged history of environmental misconduct.

Waste Management officials view the lawsuit as a ploy to use the legal system to delay a tender offer.