Addition of Surfactants to Improve Irrigation Efficiency in Commercial Turf Systems. (S06-goorahoo074050-Poster)

Authors:

- D.Goorahoo - *Center for Irrigation Technology-CSUF*
- G.Carstensen - *Center for Irrigation Technology-CSUF*
- D.F.Zoldoske - *Center for Irrigation Technology-CSUF*
- K.Mauser - *Aquatrols Corpporation*
- S.Kostka - *Aquatrols Corpporation*
- M.Franklin - *Aquatrols Corpporation*

Abstract:

The projected increase of 15 million in California's population by the year 2020 will result in further competition among various sectors for the State limited water supply. In an effort to deal with this competition, the agriculture sector has been adopting management practices that increase water use efficiency and ensure agriculture's sustainability. The goal of this research was to evaluate the addition of surfactant to irrigation water as a management strategy for commercial turf systems such as golf courses. The impacts of three surfactant formulations, applied at two rates, on steady state infiltration, turf quality, soil salinity and water storage in the root zone were investigated. Surfactant addition significantly affected infiltration rates at both the high and low application rates. However, the surfactant that resulted in the highest infiltration at the low application rates was different from the one that significantly increased infiltration at the high rates. Generally, there were improvements in color, growth vigor and overall quality of the turf as result of surfactant addition. Soil salinity and root zone water storage data are currently being analyzed and preliminary findings are discussed.

Corresponding Author Information:

Dave Goorahoo
California State University-Fresno
5370 N Chestnut Ave. M/S OF18
Fresno, CA 93740

phone: 559 278 8448
fax: 559 278 6033
e-mail: dgooraho@csufresno.edu

Presentation Information:

Presentation Date: Monday, November 11, 2002

Presentation Time: 4:00-6:00 pm
Poster Board Number: 1438

Keywords:
Surfactant, golf course, turf grass, irrigation efficiency