UCRTRAC Accumulative Research Summary
Section C: Unbiased Product Testing (fertilizers, pesticides, equipment, etc.)
Project 5

Title: One-year Evaluation of Iron Applications Applied with Three Nitrogen Fertility Rates on Tall Fescue in Riverside, California: 1996-1997.

Objective: To evaluate the performance of iron treatments (in terms of visual turfgrass quality) when applied to tall fescue fertilized at three different nitrogen levels.

Location: A mature plot of Bonsai tall fescue located at the UCR Turfgrass Field Research Facility.

Duration: 1 year

Funding Source: IMC Vigoro
Itronics Metallurgical, Inc.

Findings:

- We observed a visual turfgrass quality response to nitrogen fertility rates but not to Fe source or rate.

- Soil Fe levels during the study were greater than 45 ppm DTPA extractable Fe (a deficiency of soil Fe is indicated at 5 to 7 ppm DTPA extractable Fe). Soil pH of the research plot was 6.9.

- In summary of previous research regarding Fe response on turfgrass, rates from 0.015 to 0.922 lb Fe/1000 ft^2 per application were cited as providing at least short-term improvements in turfgrass color. The rates we tested ranged from 0.0112 to 1.650 lb Fe/1000 ft^2 per application.

- Possible explanations for the lack of Fe response include 1) Fe availability in the soil was good with a soil pH = 6.9; 2) tall fescue may not respond to Fe as other turfgrass species; and/or 3) we should have tested a standard iron sulfate foliar application treatment.

- Note: This study should be duplicated at a more-suitable location.

Status: A one-year study was completed and a final report was prepared.
