

Development of Irrigation and Nitrogen-Fertilization Programs on Tall Fescue to Facilitate Irrigation-Water Savings and Fertilizer-Use Efficiency

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Project Leaders

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This progress report describes the first six months of activity for the third year of the project "Development of Irrigation and Nitrogen-Fertilization Programs on Tall Fescue to Facilitate Irrigation-Water Savings and Fertilizer-Use Efficiency." A brief summary of each task and subtask is provided below.

Task 1: Implement treatments according to protocol.

Four irrigation and three nitrogen treatments have been implemented according to the revised protocol presented in the 1998 Annual Progress Report (Table 21). These treatments are identical to those implemented in 1999 (1999 Annual Report; Table 1).

Task 2: Implement data collection according to protocol.

Data collection proceeds well. Visual ratings of turfgrass quality and color have been collected continuously from the previous two years, with the first data of the third year having been taken on January 7, 2000. Visual ratings of percent leaves that are wilted and rolled and visual ratings of percent leaves that are fired and brown to yellow have been conducted on an as-needed basis, and as of July 31, 2000, includes seven rating dates for the current year. Other measurements which have been continuously taken from the previous two years include: clipping yield, TKN, and N uptake (first collected April 7 for 2000), volumetric soil water content (first collected January 18 for 2000), soil water tension (first collected January 4 for 2000), and weather data (continuously collected). Though not included in this progress report, current, running data tables are maintained for most measurements.

Task 3: Implement research plot management according to protocol.

All aspects of plot management proceed well. Mowing, irrigation, irrigation-system checks, and fertility are being conducted according to schedule.

Task 4: Implement outreach activities (revised upon approval by Casey Walsh Cady on

11 May 2000).

Subtask 4.1: Plan and prepare two oral presentations and identify potential meetings and dates where these presentations will be delivered.

The oral presentations are listed below:

1. September 12, 2000. "Results from a Survey of Professional Turfgrass Managers in Southern California Concerning Their Use of Turfgrass Best Management Practices," 2000 University of California- Riverside Turfgrass Research Conference and Field Day, Riverside, CA. 300 estimated participants, including professional turfgrass managers, personnel involved in the fertilizer industry, educators, and consultants. This presentation will include the results of the 437 BMP surveys completed in conjunction with the outreach oral presentations from the first two years of the project. The information obtained from these surveys guides our understanding why there are limitations to BMP implementation, which in turn guides us in our education and research efforts.

2. November 14, 2000. "Development of Irrigation and Nitrogen-Fertilization Programs on Tall Fescue to Facilitate Irrigation-Water Savings and Fertilizer-Use Efficiency," FREP Program Conference, November 14, 2000, Tulare County, CA. This presentation will summarize the background objectives and data of the research project, including the results of the BMP surveys.

Subtask 4.2: Present two oral presentations.

Please note that the activities associated with Subtask 4.2 will be accomplished on September 12, 2000 and November 14, 2000.

Subtask 4.3: Plan and prepare one popular article and submit for publication.

A popular article is being developed for publication based on the results of the BMP surveys taken in conjunction with the outreach oral presentations from the first two years. This task will be completed as scheduled by December 2000.