

Water Management



Conserve Water Through Infrequent Irrigation of Bentgrass Fairways

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Objective

Determine irrigation frequencies that maintain high-quality creeping bentgrass, colonial bentgrass and velvet bentgrass fairways while reducing water use.

Summary

Turfgrass irrigation practices have gained increasing importance as communities place greater restrictions on water use. Determining the optimum irrigation frequency for creeping bentgrass, colonial bentgrass and velvet bentgrass fairways will provide a means to reduce water use without sacrificing turfgrass performance.

Research plots of creeping bentgrass, colonial bentgrass and velvet bentgrass were established under a rainout shelter and maintained as high-quality fairway turf. Turfgrass was watered with 100% ET replacement at four irrigation frequencies: 4 times per week; 3 times per week; twice per week; and every 14 days from June to September. Mini-lysimeters were used to determine daily ET rate and turfgrass quality was rated visually at regular intervals throughout the study.



Results

- Irrigating one to three times weekly based on 100% ET replacement produced turfgrass above the minimum acceptable visual quality rating (6.0). Irrigation at 14 day intervals produced unacceptable turfgrass quality.
- In 2005, turfgrass irrigated three times per week had a higher ET rate than turfgrass irrigated twice or once per week.
- It was necessary to irrigate two or three times per week during July and August to maintain acceptable turfgrass quality.

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