

Kansans find zoysia drought tolerance better with less frequent water

MANHATTAN, Kan. — Kansas State University's Jack Fry and Ned Tisserat report that a study suggests that lengthening time between irrigations creates a more drought-resistant zoysiagrass.

Noting wide-ranging findings from research being conducted at the school, Fry and Tisserat wrote in the Heart of America Golf Course Superintendents Association (HAGCSA) newsletter that daily-watered zoysiagrass was more shallow-rooted than turf watered at the onset of wilt. In addition, leaves of daily-watered plants were more succulent, and less prepared for oncoming drought, they said.

"After an extended cool, wet,

cloudy period, more frequent irrigation may be necessary to accommodate a plant that is less prepared for drought," they said.

Other Kansas State findings include:

4 When exposed to an extended, severe drought in the greenhouse, buffalograss was ranked ahead of zoysiagrass, Bermudagrass and tall fescue, in that order, for drought tolerance and recovery. Providing new information on how grasses resist drought, this work found

that tall fescue is a drought avoider that is deeply rooted but has little ability to tolerate drought internally. Zoysia is relatively shallow-rooted, but exhibits good tolerance to internal moisture deficits. "Bermuda and buffalograss have the best of both worlds — relatively deep rooting and good tolerance to internal water deficits," Fry and Tisserat wrote.

4 Buffalograss established most quickly when it was seeded between May and July. Priming

buffalograss burrs by soaking in water enhanced germination, but it had little effect on time to complete coverage.

4 Nematode populations tended to be aggregated or clumped in the greens. "Therefore, superintendents should take this into consideration when sampling greens," Fry and Tisserat reported.

4 The fungus *Rhizoctonia solani* AG-2-2 Turf was found to be the primary cause of large patch disease on zoysiagrass.

The fungus primarily attacks the shoots, not roots, during cool, wet periods in spring and fall.

4 Fungicide trials conducted over the last five years indicate that a single fungicide application in late-September to mid-October will help suppress fall and early-spring large patch development. Applications should be made in fall before symptoms appear, they wrote, and additional spring applications may be required during favorable weather conditions.

Nicklaus names Sanders Turf Super of the Year

NORTH KONA, Big Island, Hawaii — Earl Sanders, course superintendent of Hualalai Golf Club here, recently received the Jack



Earl Sanders

Nicklaus Award, Golf Turf Superintendent of the Year for 1995. This award is given for

"excellence in golf course turf maintenance using the highest degree of professional ethics and standards in the field."

The award recognizes Sanders' supervision of an exceptionally fast grow-in of Hualalai's Jack Nicklaus-designed, 18-hole signature course.

"The course was playable in three months from the last day of grassing," said Sanders, who has worked on three other Nicklaus projects.

"The grassing procedure was compressed for the course and created unique construction practices which required careful monitoring," he said.

"Because the Hualalai site is built entirely upon lava, the irrigation was trenched in the rock and the soil imported on top."

Prior to Sanders' two years at Hualalai, his work took him from golf courses in Arizona to weathering seven hurricanes to complete a course in Guam.

He arrived in Hawaii in 1987 to supervise the course and related grounds at Kauai Lagoons, Westin Kauai, Lihue.



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