

## EFFLUENT WATER FOR GOLF COURSES

A three year study by the University of Arizona soil scientists indicate that municipal effluent water is suited for use in turf irrigation. At present, only 16 percent of Phoenix golf courses and 29 percent of Tucson, AZ fairways use effluent water.

Most golf courses have their own wells, and irrigation water costs them between \$40 and \$150 per acre-foot. In Tucson, buying effluent costs about \$400 per acre-foot, and using drinking-quality water costs \$440.

Soil scientist Ian Pepper and plant scientist Charles Mancino said that comparing irrigation with effluent and drinking-quality water proved turf quality depended on the amount of water delivered, as well as water quality. Effluent irrigation must be managed differently. Higher levels of nitrogen, phosphorus and potassium in the wastewater can reduce reliance on fertilizer in the summer.

In soil irrigated with effluent, sodium and phosphorus reached levels that warrant different management practices than normal. Reducing phosphorus fertilizer would allow the grass to use the nutrients in the effluent. Applying calcium sulfate or sulfur would reduce sodium in the soil.

Turfgrass turning yellow during the summer may be the biggest problem with irrigating with effluent. Foliar iron applications will take care of the chlorosis, but it is expensive.

Although municipal golf courses may have a problem with expense, resort-owned courses should not.

## TURF MANAGEMENT SEMINARS

The National Institute on Park and Grounds Management announced two athletic turf management seminars.

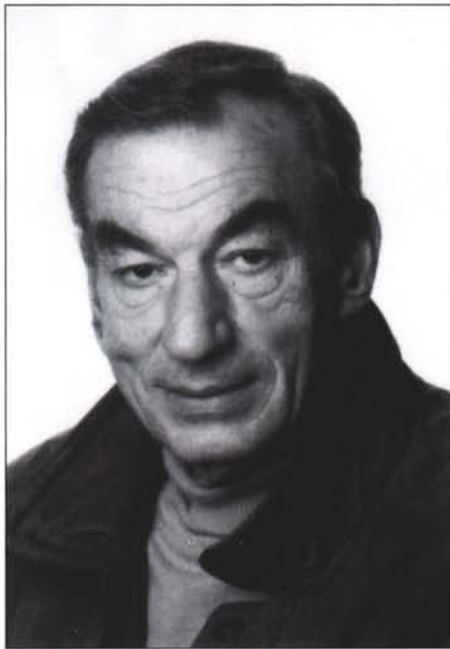
The first will be held March 19-20 in Roanoke, VA. The program includes: "Principles of Athletic Field Cultivation, Mowing and Irrigation;" "Minimizing Pest Damage Through Good Athletic Field Management;" "The Effect of Compaction on Athletic Field Turf;"

"Repair, Renovation or Reestablishment of Existing Athletic Fields;" "Principles of Warm and Cool-Season Turfgrass Fertilization;" and "Factors Influencing Turfgrass Selection For Use on Athletic Fields."

The second seminar is in Providence, RI, March 23-24. The program includes: "Turf Breeding for Athletic Fields in the Nineties;" "How Do I Know What Grass I Have?;" "Endophytic Grasses for Reducing Insect Damage in Sports Turf;" "Environmental Impacts of Turf;" "Nitrogen Use and Efficiency in Managing Athletic Field Turf;" and "Weed Management in Sports Turf."

Contact the National Institute on Park and Grounds Management, (414) 733-2301, for information about either seminar.

## DUICH JOINS TEE-2-GREEN



Dr. Joseph M. Duich has joined Tee-2-Green Corp. as a technical advisor and consultant. The retired Penn State turfgrass science professor assisted professor H.B. Musser in developing Penncross creeping bentgrass, released in 1955. He later developed Penneagle and PennLinks creeping bentgrass.

As a consultant and technical advisor, he will address golf course superintendents' questions and management practice inquiries concerning the "Penn Pals" creeping bentgrasses.

## NEW MANAGER FOR TURF-SEED

Russell Hayworth joined Turf-Seed, Inc. as southwest marketing manager. He will be marketing all Turf-Seed varieties and blends, including Citation II, Quickstart, Charger, and the "Penn Pals" creeping bentgrasses. He will also be involved with new product development and testing.

Hayworth attended Oregon State University and was involved in Oregon grass seed production for 10 years. For the last four years, he marketed turfgrass seed in Southern California and Arizona.

## MONSANTO CONTRIBUTES TO GCSAA SCHOLARSHIP AND RESEARCH

The Monsanto Agricultural Company of St. Louis presented the GCSAA Scholarship and Research with two gifts totaling \$10,000.

Half of the contribution will be used for general support of education and scientific programs operated by the GCSAA.

The remainder will be included in the Chet Mendenhall Memorial Fund, named after a founding member of the GCSAA.

The contribution renewed Monsanto's charter membership in the Platinum Tee Club, the premier support group for GCSAA S&R.

## FORTRESS COURSE TO OPEN

The Fortress, the only golf facility in Frankenmuth, MI, is scheduled to open in July. It was designed by Dick Nugent Associates and is owned by Zehnders, who also own a independent family restaurant.

The Fortress is located on the site of a nine-hole public course. The existing holes were torn out and replaced with a 6,820 yard, par 72 course in the style of a prairie links.

The Fortress reflects characteristics of golf's early Scottish origins where wind is always a factor, and the holes play through and around fescue covered mounds to well guarded, sectioned greens.