

Field test started on subsurface drip

The Center for Irrigation Technology has initiated a three-year field trial to study subsurface drip irrigation of turfgrass to discover its long-term effectiveness and evaluate products of participating manufacturers.

Plots have been established from tall fescue sod. Participating manufacturers have recommended spacing for their products, and each plot will include lateral spacings 33 percent narrower and 33 percent wider than the recommended spacing.

Drip lines will be installed about 4 inches below the soil surface and the sod will be watered daily, with gross applications based on reference evapotranspiration, adjusted for a crop coefficient and individual system efficiency.

Irrigation times for each product and lateral spacing will be adjusted so all areas receive the same net amount of water.

Wastewater

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problematical. Some climatologists say nothing can be done, that the situation will correct itself in 5, 10, 25 years."

Watson said artificial turf could become the "grass" of the future since it requires no water.

Wastewater, he said, is an important water resource which "we are not now using intelligently" and which "we can not afford to ignore."

"After treatment, wastewater is virtually pure water," he said. "It should be strenuously promoted. Active-growing grass will remove a major portion of the impurities in effluent; the soil with its microflora will remove the remainder."

At the same time, the nitrogen removed benefits the turfgrass, diminishing the need for fertilizers, Watson said.

"Not only does effluent provide the nutrients as well as much of the water required by turf, but, as a result of filtration, good quality water is percolated through the soil down to the level of ground-water aquifers and, in effect, replenishes them," he said.

He added that another consideration making wastewater irrigation attractive is that it provides for on-land disposal which the Environmental Protection Agency is encouraging as opposed to disposal into navigable waters.

"More than 2,000 facilities in the U.S. provide such a low-cost method of on-land disposal of municipal and industrial wastewater. About 75 of the nation's golf courses use treated wastewater for irrigation," Watson said.

"Sprinkler irrigation equipment can apply water wisely and without waste. The major advantage cited is that it places control in the hands of the best qualified individual on that turfgrass facility — the turfgrass manager."

"Automatic controllers coupled with valve-in-head, or valve-under-head sprinklers geared to apply water commensurate with the ability of the soil to accept it, conserves substantial quantities of water, and produces superior turfgrass," he said.

Watson said cloud seeding and desalination are, for the most part, prohibitively expensive and of limited benefit to water-needy areas.

Toro's Adams cautioned that it is "not feasible to use wastewater for golf course irrigation unless there is an automatic underground irrigation system."

The turfgrass in each plot will be visually rated on a scale of 1 to 9 for color, density, texture, uniformity and pest presence. Plant stress measurements will be taken using infrared thermometry.

At the end of the study, CIT will offer guidelines on the operation and maintenance of subsurface drip irrigation systems, and will be able to estimate the water-saving potential. CIT will issue reports annually.

Initial funding for the project has come from the Northern California Turfgrass Council, Metropolitan Water District of Southern California and participating companies.

Irrigation design courses planned

Ten-day design classes are being held through May at Weather-matic's College of Irrigation Knowledge in Dallas, Texas, according to Director of Training Richard B. Choate.

The college, which has been training distributors, contractors, specifiers and professionals in related fields since 1966, opened its 10-day classes in September. Abbreviated five-day courses for specifiers are normally offered in late May and early June.

Choate said enrollment is strictly limited to insure individualized instruction. The basic course includes lectures, demonstrations and practical

exercises, both in the classroom and as homework assignments.

Subjects include soil-water-plant relationships, basic and advanced hydraulics, sprinkler application and layout, and piping system design, as well as such business-related topics as materials pricing and advertising sales promotion.

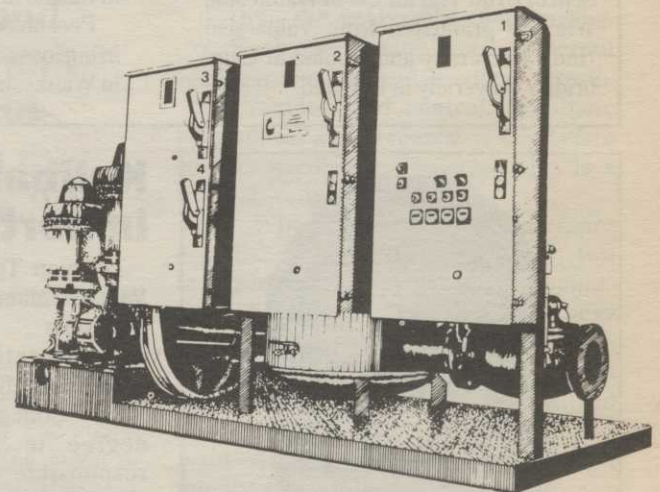
Courses will begin Oct. 16, Nov. 6, Dec. 4, Jan. 8, Jan. 22, Feb. 12, March 5, March 26, April 23, May 14 and June 4.

More information is available from Weather-matic distributors and regional sales managers, or from Choate at 214-278-6131.

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