

Moisture sensor-controlled irrigation on turfgrass plots at the University of Florida Institute of Food and Agricultural Sciences, Ft. Lauderdale, under the direction of Dr. Bruce Augustin.

## Irrigation: putting water where it's needed when it's needed

One area where water conservation awareness is a top priority is in irrigation equipment manufacturing companies.

The overriding concern is convincing people that a professionally-installed irrigation system is one of the best and most efficient ways to put water where it's needed and only when it's needed.

Ninety percent of all irrigation companies in the country are located in California; that includes three of the largest, Toro, Buckner, and Rain Bird. Located in a Dallas, TX, suburb is another, Weather-matic.

### Rainbird

Rainbird's Mike Baron is product development manager and says the company's philosophy is to make its products more efficient.

"Water conservation is very important to us," says Baron. "We don't want to wait until government mandates come down before we start confronting the problem. We (irrigation industry) will probably be targeted first (for any type of restrictions)."

Baron said there are two schools of thought—one is 'I'm going to water less but stay wasteful' and the other, 'I'm going to water more efficiently and make it do more.' The latter is what Rain Bird and other irrigation companies espouse.

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**"What it boils down to is the selection of equipment designed so as to avoid waste and the proper installation and maintenance."**

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—Putnam

Baron also believes the manufacturer must play a role in educating landscapers and contractors in the latest in equipment and in the type of equipment that would best suit their needs and those of conservation.

"In 1982, we developed a pressure

compensating bubbler installed on a fixed riser," said Baron. "We determined the reason why it hadn't taken off faster with contractors was because it was new, installation was different and they were wary of it."

From January through April, the characteristically slow season for irrigation contractors, Rain Bird provides distributors and managers with slides and notebooks to educate their contractors on the latest methods and equipment.

The reception to the pressure compensating bubbler has improved considerably.

"Pressure regulation is the key because it allows transition from the design to whatever the contractor has planned for it. This type of bubbler is able to balance the precise amount of water coming out."

Baron pointed out the controlling system is also important.

"With the new solid state designs, you can be more precise with when you want to water than with mechanical dials. The slight fluctuations (in mis-timed controllers) do add up."

Rain Bird was the first irrigation manufacturer to have matched precipitation rates across nozzle sets, which means the amount of water going onto an area is the same regardless of the trajectory pattern.

The Toro Company was the first to introduce matched precipitation rates, but Rain Bird was the first to match it across sets—saving designers time and money, according to Baron.

## Toro

John Skidgel, golf marketing manager of Toro Irrigation, Riverside, CA, agrees the secret to efficient irrigation is in the controller, and at press time, the company was scheduled to introduce a new one.

"The future of the industry is computerization," predicts Skidgel. "We already have gotten away from drawing boards and use computer-aided design for our systems. The future of our business is meeting the needs of different groups and doing it with conservation in mind and still maintain a nice-looking turf."

## Buckner

At Buckner Sprinklers in Fresno, CA, energy conservation is as highly regarded as water conservation in the company's irrigation systems.

Sprinklers and valves requiring less pressure require less horsepower and therefore less electricity.

The company, according to golf marketing manager David Truttmann, is also incorporating in its system design, a reduced angle of trajectory so that water gets to the soil faster and that there is less of chance for the wind to carry off water spray.

Buckner's controllers have their own video control system which permits watering only when necessary.

They are also teaching designers and users about the equipment and what equipment works best in various situations.

"Energy and water conservation have always been a concern to the ag industry, but only recently have they become important to turf," commented Truttmann.

## Weather-matic

Charles Putnam is vice president of sales for Telsco Weather-matic, Garland, TX, and is incoming president of the Irrigation Association. He worries about the industry "over technologizing" itself.

"We need to educate the public to put water where it's needed," says Putnam. "Even if it's inexpensive, an automatic system is better because it's more efficient."

Seventy-five percent of the company's business is in the commercial market and Putnam says business is great.

Weather-matic fully supports an irrigation licensing law that went into effect in 1973 and is the most advanced law of its kind in the country.

The Texas Board of Landscape Irrigators was one of the driving forces behind it.

"Basically, it protects the consumer and protects the supply of potable water," Putnam explained.

Of the 900 would-be irrigation contractors who take the test, only about half of them pass. The test includes designing an irrigation system with water conservation in mind.

Putnam outlined the company's philosophy on water conservation.

"What it boils down to is the selection of equipment, designed so as to avoid waste, and the proper installation and maintenance."

Putnam also believes that down the road controllers will become obsolete.

"Systems will be developed that waters only when the ground needs it," he said.

The company's Rain-stat comes close to that. The device overrides the controller so that when it gets to a certain level of rainwater, it turns the system off.

"In the future we'll see more input from landscape architects and local codes. These are the things that will dictate water usage. There'll be much greater municipality control," Putnam concluded.

## Drip irrigation

Drip irrigation, (water comes out precisely where the emitter is with no spray) while prevalent in the agricultural industry, is not as popular in the landscaping profession.

Skidgel from Toro says that most landscape areas are well-trafficked and that having drip emitters in those areas would not be practical. Toro, does, however, market a brand so its distributors will have it to offer customers.

"(It (drip irrigation in landscaping) is a coming thing, no doubt," Skidgel said.

Rain Bird is making clear its position in the drip market. Says Baron, "We have a line of drip irrigators and some lines under development. We want to be in the forefront of products using localized irrigation."

Weather-matic's Putnam is more pragmatic.

"An increase in water rates will increase interest."

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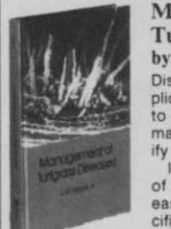
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