

Irrigation future belongs to technology

BY MARK LESLIE

A move toward the basics and improved moisture-sensing technologies will characterize the future of the computer irrigation control industry, according to industry officials.

"Your imagination can go as far as you want," said Irrigation Association Executive Vice President Bob Sears, speaking of the future of computer controllers. "We're now expanding beyond the control by the weather station on site to moisture sensors or tensiometers, et cetera, in certain areas that are tied back into the system... Relatively soon, I see simple, yet sophisticated, moisture-sensing technologies that will connect back to the control system that will adjust the amount of water being applied even beyond the ET rates and current weather conditions that come from the weather station."

Sears said computerized systems will also be mixing reclaimed wastewater and potable water.

And he added: "I would not be surprised if we see developers in new housing projects—the first ones being adjacent to new golf courses—tie these computerized systems to the residential areas."

"Functional" is a key word for the industry's future, according to Kurt Thompson, national sales manager for Buckner, Inc.

"We as manufacturers are terribly guilty of trying to best each other and adding nonfunctional things to our systems," Thompson said. "We all have features no one



A new computer-controlled irrigation system is inspected at Deer Run Country Club in Casselberry, Fla.

Photo courtesy of Century Rain Aid

uses." Thompson predicted: "We will get away from the hype and glitz, and get down to some nuts and bolts, the basics of what we've got but making it a little more versatile."

That change, he said, will come from hardware changes. "The next generation (of computer controllers) will be able to fit multiple situations from a hardware standpoint and still be controlled simplistically with the same type of system as now," Thompson said.

"You will see a refining process, making it less complicated to accomplish the same task — instead of making it a global and universal

tool, making it adaptable so that you whittle away the things Golf Course 'A' wants but Golf Course 'B' does not want," he said.

Thompson said the next generation of controllers will automatically perform "the number-crunching things" built on certain constraints.

"It will require the higher technology of the new-technology PCs running at higher rates of speed, which has always been a limiting factor," he added.

Steve Christie, director of sales and marketing for Rain Bird Sales' Golf Division, said computer systems will be used for "more than just keeping the grass green. There are a lot of great old golf courses that look terrific, and they did that without the help of a computer. But today — with the concerns of

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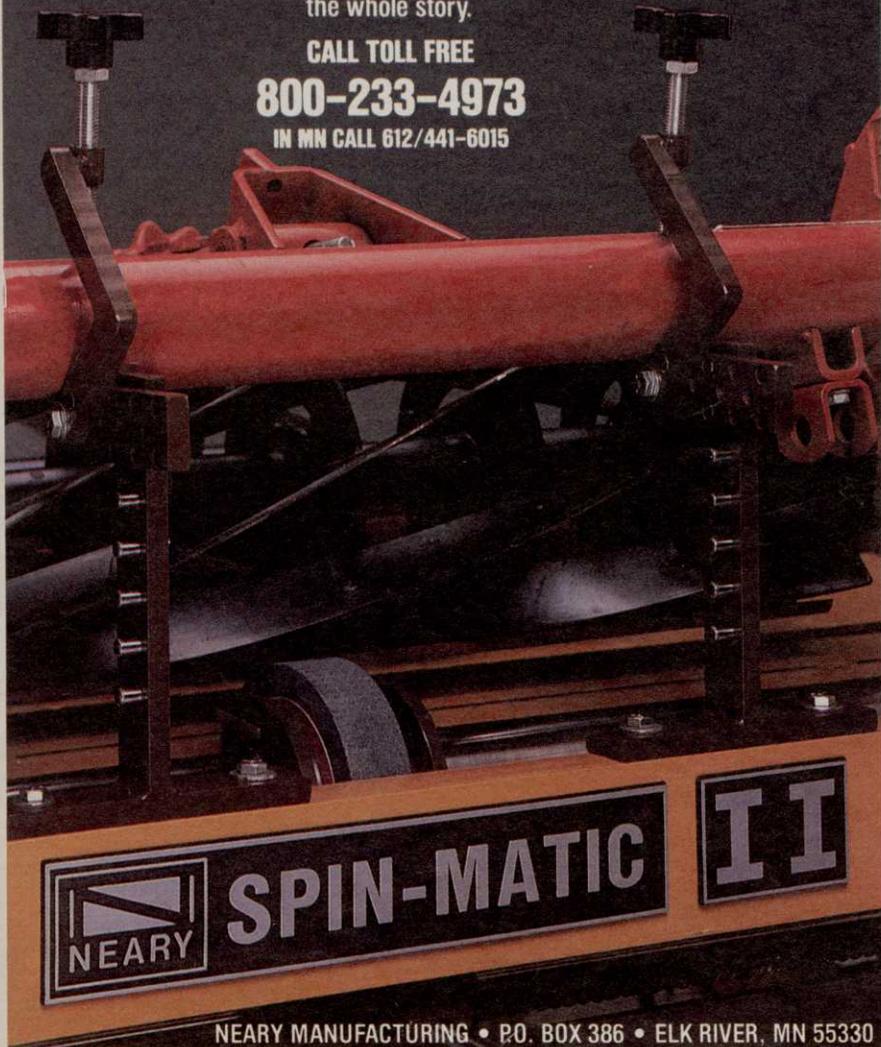
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Irrigation

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Manufacturers' list prices on computer control systems range from \$17,000 to \$28,000, but they normally sell for 40 percent less, said one industry source. The price usually covers the software, support, training, and the interface that allows the computer to talk to the satellites.

The satellites cost about \$3,000 per unit. An average 18-hole course on the East Coast will install 12 to 15 satellites while a West Coast course, which waters the rough, will have 30 to 40.

A key feature for many superintendents considering a computer

controlled irrigation system is whether it can run other programs.

Expanded uses

"The demands of superintendents include so many things," said John Skidgel, golf marketing manager for The Toro Co. Irrigation Division. "They want records. They want to know if there's any shut-down. They want to operate lights on the tennis courts, open and close valves on the ponds to keep the water levels at a certain point. They want to turn on their aerator out in the middle of the pond. On and on and on..."

"We've even got additional programs so guys can do things like

lightly sprinkle the fairways to remove frost right before play starts in the morning."

Some systems are PC-dedicated; others are not. The difference is that one can be used for other purposes while it is controlling the irrigation; others cannot.

But Wright said it shouldn't matter. "You figure you irrigate from 10 at night to 6 in the morning. No one uses the computer for other things at that time," he said.

The difference from one system to another?

"We don't find a whole lot of difference," said consultant Mervis. "They're all trying to do the same thing."

Future

Continued from page 17 energy and ground water contamination — this is a way of control.

"Superintendents can use computers to solve environmental concerns."

Christie predicted systems will have information "as to how much water, over what period of time, is needed to wash fertilizer in slowly rather than going straight to the ground water."

Sears said one manufacturer is developing a system programmed with weather data from the last 30 years. A superintendent will punch up his ZIP code and the program will plug that data right into the system. The weather station will then base itself, and make daily

adjustments from that data.

The cost

The cost of computer controllers, Thompson said, will depend mostly on supply and demand.

"You pay a premium for new technology," Thompson said, "but cost will stay the same proportionately."

Ray Davies, superintendent of Virginia Country Club in Huntington Beach, Calif., and president of the Golf Course Superintendents Association of Southern California, said he doesn't consider it a disservice for a company to promote its system's many capabilities, even if they are not used much.

"It may be an inaccurate sales tool," he said. "You only talk about a bell or whistle if that thing's important to the customer. And it's up to the customer to decide if it's what he needs and to buy accordingly."

Supers

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gallon more than before. The price of oil had just gone up to \$24 a barrel and was destined to climb over \$30.

"We get monthly 1,000- to 1,500-gallon deliveries," Jones said. "I hate to think what my next fill-up is going to cost."

Ken Flisek was more optimistic about his situation at The Woodlands course in Falmouth, Maine, which is closed in the winter.

"Our fuel is only about \$10,000 out of a \$400,000 budget," Flisek said. "That may go up to \$12,000 next year. That doesn't count heating fuel for the maintenance building."

In the heartland of the country, Stephen Biggers IV reported a similar feeling.

The president of the Indiana Golf Course Superintendents Association and superintendent at Highland Golf and Country Club in Indianapolis, Ind., Biggers said, "Guys with a longer season will be hurt a lot more than us."

Biggers said gas prices had gone from \$1.00 to \$1.30 per gallon, but that impact was minimal considering the size of his overall budget.

He said he had not bought oil or chemicals since the Middle East crisis arose, and added: "I don't know what will happen in the chemical industry. I'm sure there's plenty in stock. New materials will probably go up... More than anything else, the cost increase would be in products that use surfactants (surface active agents), wetting agents or emulsifiable concentrate-type materials."

"Luckily, we're almost out of the season for chemical applications."

Saying that he did not think cost increases for chemicals would hurt much, Flisek added, "Unfortunately, once the fuel price goes up, the price of every commodity in the world goes up."

Jones thought the worst effect would come from the domino theory.

"All our fertilizers are based on fuel oil. Our chemicals are based on fuel oil... And I think the domino

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