

By Roy C. Padrick,
Field Editor
rcpadrick@meistermedia.com

When the giant black valve opened on the new subsurface irrigation system at Holloway Tree Farm in Leesburg, FL, a round of applause broke out among the dozens present.

The flowing water was the culmination of years of research by Dr. Dick Holloway and the Holloway Technology Inc. team to develop an irrigation system that addresses the need for growers to conserve water. The system was unveiled Sept. 2 to a crowd of academia, growers, media, and invited guests. Florida's commissioner of agriculture, Charles Bronson, was the keynote speaker.

The research, partly funded by USDA and the Florida Department of Agriculture and Consumer Services,

Plain Sense

A new, tiered irrigation system offers containerized nurseries substantial water savings.

beds, pipes, valves, pumps, and computer controls that work in combination with a water-capture and recycling reservoir.

"Our water-delivery system permits selected beds to be flooded to a controlled height, for a specific duration of time before draining the unused water back into the reservoir," Dellinger says.

The design is simple: Multiple plains are created in a descending

to be extremely efficient at rainwater harvesting and the recapturing of unused water," he says. "Any water not absorbed by plants during an application or rain event is quickly recaptured and stored for future use, reducing dependence on surface and groundwater sources."

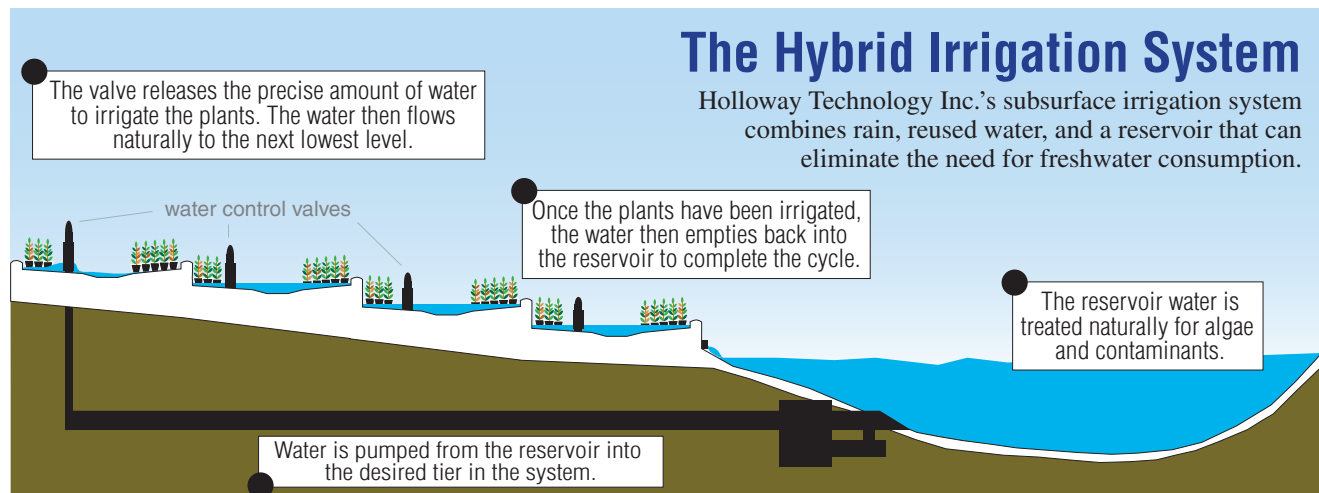
Added Benefits

As well as greatly reduced water usage, Holloway says the system helps with fertilization, weed control, and pest control.

"Many surface-level irrigation systems allow excess water to run through plant pots when they're overwatered, causing fertilizers to be leached from the pot," says Holloway.

"But, this system delivers water from the bottom up, so fertilizer rinse-through is no longer an issue.

"HIS also performs as a natural



The Hybrid Irrigation System

Holloway Technology Inc.'s subsurface irrigation system combines rain, reused water, and a reservoir that can eliminate the need for freshwater consumption.

was a collaborative effort by Holloway Technology, the University of Florida, and the St. Johns Water Management District. The design, called the Hybrid Irrigation System (HIS), is a cost-effective and environmentally friendly method for large-scale containerized nurseries to water plants.

Water Works

According to Kevin Dellinger, Holloway's tree farm manager and chief operating officer, HIS is made up of polyethylene-lined irrigation

pattern to allow for natural drainage. Water from the reservoir located at the lowest point of the system is pumped to the highest desired plain. Once the level is filled, the water is drained to a lower plain — leaving the maximum amount of irrigation in the containerized plants.

During rainfall, the natural slope of the plains allows the captured water to drain directly into the reservoir. This optimal use of reclaimed water, Dellinger says, can eliminate the use of fresh water altogether.

"Our system is engineered

weed control. The surface of pots, where weed seeds commonly land and germinate, is kept dry. If weed seeds never get wet, they don't sprout."

According to Holloway, another benefit is that since the UV light from the liners reaches the undersides of leaves, the reflected sunlight discourages many bugs or confuses them to move to the tops of the leaves where direct UV light destroys them.

For more information on the hybrid irrigation system, go to www.holloway-tech.com.