



Citrus Growers Save Money by Partnering with Water Management Districts

Fifth-generation central Florida citrus farmer, Bill Lennon knows the value of water. His days are spent ensuring his 26 groves across 1,200 acres have enough water to produce his crops – if anyone knows how essential water conservation is, it's Bill.

"It's not a job, it's a way of life," says Lennon. He began managing groves in the late 1980s and worked through the midst of what turned out to be the peak of citrus farming in Florida.

"In 2003-04 we harvested over 242 million boxes of oranges. This year it was 40 million." That drastic decline was triggered by the arrival of citrus greening, a plant disease caused by a tiny bacterium that lives inside the trees. The disease reduces the quantity and quality of fruit, stunts tree growth and eventually kills the tree.

Citrus greening reshaped Florida's citrus industry. First found in 2005, it had spread throughout Florida by 2015. Growers like Lennon had to alter their routines. "I've got to try to control the stress," he explains. "Stress from lack of water, fertilizer, bugs or disease, reduces the efficiency of trees."

Fundamentally, it meant watering. Since trees must be replaced, groves are younger, diseased trees are stunted, hence there are fewer roots, and since the roots are not as deep, the plants dry out faster. "It's more like potted plants on a patio," explains Lennon, "we have to water more often." Instead of watering two or three days a week, Lennon is watering five to seven times a week. He and his crew spent most of their day driving around, turning water pumps on in the morning and off in the evening. If something unexpected happened, they didn't get back to turn irrigation pumps off until hours later – wasting a large amount of water.

Fighting an uphill battle, Lennon investigated modernizing his irrigation systems. New research and advances in technology translate to high-tech tools for growers, including automated irrigation systems and weather stations, which means saving time, water and decreasing nutrients, which can impact water quality if too much enters a body of water. However, these modern systems come at a high cost, so when he came across the St. John's River Water Management District (SJRWMD) Agricultural Cost-Share Program, he jumped at the opportunity.

The District's cost-share program reduces the financial barriers for growers like Lennon interested in adopting water-friendly growing practices. Lennon applied through a

competitive application process, and SJRWMD awarded funding to cover 75% of the cost of upgrading his irrigation systems.

“I wouldn’t have been able to do this without funding. With citrus greening and fruit reduction, owners barely break even, sometimes even lose money,” Lennon explains. “Now I run all my pumps from my telephone. I can see what the flow rate is and ensure it is all working properly. I know how much it runs and how long it runs. I can set days and length, almost like an irrigation system at your house,” says Lennon. Some groves even have remote weather systems, allowing Lennon to skip irrigation knowing there was sufficient rainfall or choose to water in the evenings when the weather is cooler.

He even saves water in the winter when he irrigates to protect crops from a freeze. “I can look at the temperature on my weather stations and crank it up when I need to and then cut it off immediately whenever the temperature is right. On cold nights we save four or more hours of watering.” SJRWMD anticipates Lennon’s projects will save an estimated 12 million gallons of water each year.

Suzanne Archer, program manager for the Agricultural Cost-Share Program, sees other benefits in reducing nutrient leaching: by reducing the risk of overirrigation, Lennon’s new systems help keep fertilizer closer to the trees’ root system, rather than being washed down. “Based on our estimates, these upgrades will reduce off-site nutrient loading of Total Nitrogen (TN) by 293 pounds and annual Total Phosphorus (TP) by 65 pounds.” Lennon is also able to use liquid fertilizer in the system, yet another way for him to save money since it’s a more efficient way to fertilize.

Agricultural Cost-Share isn’t unique to SJRWMD. All three water management districts in the Central Florida Water Initiative region, as well as state and federal partners, offer cost-share programs. A subset of the programs specifically targets farmers, growers and ranchers, providing them the opportunity to adopt new technologies that reduce nutrient leaching and conserve water. Lennon has groves located in both the SJRWMD and Southwest Florida Water Management District (SWFWMD) and has worked with both entities, along with the Florida Department of Agriculture and Consumer Services (FDACS) to find additional funding opportunities. Both FDACS and SWFWMD funding supported water-saving irrigation upgrades at other groves.

“They really want us to get this technology and implement it,” says Lennon. “They’re helping us conserve resources to help the environment. It’s a real partnership.”

To learn more about cost-share programs offered by the water management districts, visit:

- St. Johns River Water Management District: [Cost-share funding with St. Johns River Water Management District \(sjrwmd.com\)](http://sjrwmd.com)
- Southwest Florida Water Management District: [Facilitating Agricultural Resource Management Systems \(FARMS\) | WaterMatters.org/FARMS](http://WaterMatters.org/FARMS)
- South Florida Water Management District: [Grants/Funding Opportunities | South Florida Water Management District \(sfwmd.gov\)](http://sfwmd.gov).