



## Microirrigation Workshops and Results in Hillsborough County

LYNN A. BARBER\*

*University of Florida, IFAS Extension Hillsborough County, 5339 County Road 579,  
Seffner, FL 33584*

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**The objective was to provide water conservation information to residents attending Microirrigation Workshops. Water issues are a top priority for Florida. With the population growth estimated to increase 25% by 2020 to 21.8 million, the need for 26.4% more water, an additional 9.1 billion gallons of fresh water required per day, is evidence that water conservation is critical. Education is the key whereby we can impact the 50% or greater water consumption issue of using potable water for residential landscape irrigation.**

The purpose of this work was to teach residents how to conserve potable water in the landscape by installing microirrigation, about the types of microirrigation, benefits, potential problems, solutions and maintenance. This educational program affords us the opportunity to provide University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS) research based information on water conservation to Hillsborough county residents.

### Materials and Methods

Workshops are promoted using Facebook, newspapers, our website, Inspiration AM 1110 WTIS radio and brochures distributed in our lobby and at community events and locations. A survey was created which includes pre- and post-knowledge gain and behaviors that attendees plan to change/implement in the near future. In 2013, Microirrigation Workshops educated 506 local residents on the installation and benefits of microirrigation, as well as potential types, problems, solutions and maintenance. Workshop attendees viewed the various types of microirrigation installed in the Bette S. Walker Discovery Garden, our demonstration and teaching garden, located in the courtyard of the UF/IFAS Extension Hillsborough County. The types of microirrigation that are utilized and displayed include micro-sprayers, micro-bubblers, drippers and drip tubing. Follow-up surveys and emails are sent to attendees to determine workshop effectiveness, success of training efforts, to identify opportunities, implement changes as needed in the program, capture the number of potable gallons of water conserved, dollars saved and key learnings.

### Results and Discussion

Immediate pre- to postworkshop surveys reflected a 58% knowledge gain regarding microirrigation and 62% on installation

I would like to thank Hillsborough County Public Utilities for funding this workshop, including the cost of microirrigation kits for each household attending, which provided information on the UF/IFAS Extension Florida-Friendly Landscaping™ principles. These principles include: right plant, right place; water efficiently; fertilize appropriately; mulch; attract wildlife; manage yard pests responsibly; recycle; reduce stormwater runoff and protect the environment.

\*Corresponding author; phone: (813) 744-5519; email:barberl@hillsborough-county.org

of microirrigation. Microirrigation Workshop results which were secured at six or twelve months post-workshop showed that all survey respondents found the class helpful in conserving water in their landscapes. More specifically, four practices were learned by more than half of respondents: only applying 3/4 to 1 inch of water per irrigation application (63%); maintaining 3 inches of organic mulch (66%); using a rain gauge to monitor rainfall and adjust watering (57%); and following the Florida-Friendly Landscaping™ principle, Right Plant-Right Place (67%). Subsequent changes in water use by workshop attendees included: 60% of attendees installed the system. Of the 40% that did not install the kit, respondents indicated they lacked enough time or could not decide where to install the kit.

At twelve months postworkshop, more than 78% noticed a decrease in their outdoor water consumption since attending the workshop, and 73% of those who installed the microirrigation system estimated 112 gallons and \$8.00 saved per month. We believe this shows that few residents know their consumption or the cost of water, which provides yet another teaching opportunity.

Extrapolating the results for 2013 only, microirrigation workshop attendees reported that they saved 680,064 gallons of potable water and \$48,576 per year on their water bill. Comparing these amounts to Michael Dukes' (Director, UF/IFAS Extension Water Conservation Initiative) calculations for converting turfgrass square footage to landscape beds with microirrigation, the savings would be 15,589 gallons per 1,000 ft<sup>2</sup> per year. The average respondent converted 2,781 ft<sup>2</sup> ( $2.8 \times 15,589 = 43,649$  gallons per year) or 22,086,495 gallons of potable water potentially saved by the 506 attendees.

Additional opportunities include: discussions with those that have not installed the microirrigation kit about appropriate locations; sharing a copy of the installation video the workshop attendees viewed in class; possible site visits; and developing a tool for youth, school, and community gardening groups that would be helpful from a civic and community outreach perspective.

From these survey results, as well as those collected from Rainwater Harvesting Workshop attendees, we believe few people truly know how much water they use and how much a gallon of water costs; thus we have used Michael Dukes' calculations to judge relative accuracy of our survey results.