



The Difficulties of Watering Your Lawn While Conserving Water

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Orange County, Florida is facing a looming water crisis. The St. Johns River Water Management District has determined that the county, which includes metropolitan Orlando, will reach the limit of its consumptive use permit in 2013 and no additional groundwater withdrawals will be allowed. The largest waste of potable water is in the landscape, specifically on the lawn. Homeowners can't keep up with homeowner association demands and do not understand the maintenance needs of their yards or the technology of their irrigation system. The most common response for homeowners is to set their irrigation timer and forget it, not making adjustments based on rainfall or the needs of the lawn. Traditional public education programs used by County Extension offices face a daunting task when confronted with these complicated behaviors and attitudes. Several classes were held. Participants were taught about how much water to apply, when to water and the efficiency of irrigation heads. Each class had 15 irrigation clocks all functioning. Participants worked in small groups based on the type of clock they had at home. All participants touched the clock and made adjustments. Pre-test of knowledge was 20% out of 100 and the post test score was 85%, a 65% gain in knowledge. This class is part of the landscape design class. Results of the pre-test and post- test prompted the use of a survey called "Your Florida Yard and You." The goal is to better understand how Floridians think about their yards and how they care for them.

Hardly a week has gone by that a newspaper article or the nightly news has not mentioned water restrictions or shortages in communities large and small across the United States and/or around the world. The state of Florida is one of the states struggling with water shortages. The Florida Department of Environmental Protection (FDEP) estimated in 2007 that by 2025, freshwater withdrawals will be 8.5 billion gal per day. This will be a 29.5% increase or 2 billion gal more per day. Water use will continue to increase as population and development continues to grow.

Irrigation systems are common in many residential communities built in recent years and are needed to support the high-quality landscapes that are typically installed. Grass is a key landscape component. Although Florida has a humid climate, the spring and winter are normally dry and combined with the low water-holding capacity of the soil make irrigation necessary to ensure the high quality of landscapes desired by homeowners (Haley et al., 2007). These demands have pushed municipalities and counties to increased water restrictions. One such county is Orange County, Florida. The Orange County Government and the St. Johns River Water Management District (SJRWMD) have been trying to reduce water usage from 175 gal of water per person per day to 90 gal. What could be done to encourage people to change their behavior and use less water?

Materials and Methods

In order to change water conservation behavior to decrease water used outside by homeowners with automated irrigation systems some base line information about their current behavior was needed. The survey entitled "Your Florida Yard and You" was developed by Israel and Monaghan in 2009, to better understand what Florida residents think about and how they care for their yards. Some questions were added to better fit this project. The survey was mailed to 1000 Orange County residents. The recipients were randomly chosen from a list of 7,700 addresses that had been classified by Orange County Utilities as high water users. To encourage a higher return of completed surveys each recipient received a \$1.00 incentive in the packet. The number of surveys returned was 293, almost a 30% return rate. The survey included 32 questions related to irrigation and fertilizer practices and waterfront plantings and care. There were 14 questions seeking demographic information.

Results and Discussion

The results from the survey indicated that there are many factors for residents to consider when watering their landscape. Such factors included knowing how to operate their irrigation system controller, comprehending what made an irrigation system more efficient, understanding the different water needs of the different plants in the yard, watering the yard while working within water management district restrictions and maintaining the yard within the required HOA guidelines. The data also support that

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the participants' behavior did not match with their knowledge. For instance, the responses to what month(s) is it recommended to fertilize the lawn did not match with their responses to the question what months do you fertilize the lawn. There are differences between their knowledge level and their behavior practices.

What does this mean for Extension agents? It means there are many folks that still need to be educated. It also means that Extension will need to segment the approach to include instruction in all the different areas as well as determine what approach may increase the change in behavior and not just increase the level of knowledge gained by program participants.

Literature Cited

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