Can workshops on household water use impact consumer behavior?

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In Florida, where population growth, drought, and saltwater intrusion are affecting finite water sources, researchers are looking for effective ways to educate consumers about household water use habits. Despite an average annual rainfall of 55 inches, Florida was included on the Natural Resources Defense Council's list of states with the greatest risk of water shortages in the coming years; the daily total state domestic water use in Florida is the fourth highest in the United States. A large proportion of Florida's water is not used for human consumption, but is used for irrigating residential landscapes. In fact, a recent South Florida Water Management District study reported that outdoor water use in their area constitutes up to 50% of total household water consumption, and that up to 50% of the water applied to lawns is wasted through evaporation or overwatering.

Universities and municipalities are addressing this critical environmental concern through outreach and extension programs designed to educate the public about water conversation. But are these workshops effective in actually helping participants reduce their water use? Tatiana Borisova and Pilar Useche from the University of Florida conducted a study published in *HortTechnology* to determine the effectiveness of free, 2-hour irrigation management workshops conducted by the Florida Cooperative Extension Service in cooperation with a local water provider in order to find out if there were short- and long-term impacts of workshop participation. "Landscape management outreach programs have been implemented by regional and local agencies, Cooperative Extension Services, and other organizations to encourage more efficient

irrigation water use and residential water conservation," explained lead author Borisova. "However, limited information exists about the effectiveness of such programs."

The team studied actual water use data for 12 months before and after workshops, and then compared water use data from workshop participants with the water use of households that did not participate in the workshop. They found "statistically significant reduction in water use" only in the month of the workshop. "Although the workshop has an impact on water use, this impact is very short-lived," noted Borisova. "For workshop participants and nonparticipants, water use returns to the base level immediately in the months following the workshop." The authors added that reinforcement of the educational message received during the workshop is probably required to sustain water-use reductions over time.

The team also found that the effect of workshop attendance depended on the sample of the households considered. For example, in the subsample of the low water-use households, water use tended to increase following the workshop. "The overall objective of the workshop was to improve the irrigation efficiency by reducing water wastes. However, households with low average water use may already be technically efficient, and workshop attendance cannot reduce their irrigation water use further without negatively affecting the yard aesthetics and plant health," explained Borisova.

Borisova and Useche recommend development of a comprehensive evaluation approach for water use programs that includes evaluation of actual water use reductions in order to more accurately quantify program impact, design more effective educational programs, and better target the programs to consumers.

More information: The complete study and abstract are available on

the ASHS *HortTechnology* website: horttech.ashspublications.org/ … nt/23/5/668.abstract

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